



PATIENT HANDBOOK

Your Guide to Surgery

**Everything we do for you
before, during and after.**

Endometriosis Surgical Specialists International

Dr. Andrea Vidali · Founder and Director

516-584-8710 · internationalendo.com

Your Guide to Surgery

A patient handbook from Endometriosis Surgical Specialists International

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Written by Dr. Andrea Vidali, MD, with the ESSI clinical team.

Medical disclaimer

This handbook is educational. It describes how we generally approach endometriosis surgery and recovery, and it is not a substitute for medical advice, diagnosis, or treatment from a qualified clinician who knows your case. Your own plan may differ from what is written here, and the specific directions given to you by your surgeon and your hospital always take precedence over these pages. Nothing in this handbook creates a doctor–patient relationship, and no outcome is promised or guaranteed.

In a medical emergency, call 911 or go to the nearest emergency room.

A note on the evidence

Clinical positions in this handbook reflect the published literature as of 2026 and the practice of ESSI. Medicine changes, and some of what is described here will be superseded. Sources are listed at the back so you can see what each statement rests on. Where the evidence is genuinely uncertain or disputed, we have tried to say so rather than smooth it over.

Welcome

If you are reading this, you are most likely preparing for surgery with us. We wrote this handbook to walk beside you through the whole journey — to explain how we think about endometriosis, how we evaluate you, what we do in the operating room, and exactly how to prepare for surgery and care for yourself afterward.

We have organized it into two parts. The first part explains our philosophy and how we work you up — the ideas behind everything we recommend. The second part is practical: your preoperative instructions, what happens on the day of surgery, and your recovery and discharge instructions.

Please keep this handbook somewhere easy to find. Bring your questions to every visit. And remember that the instructions here are general — your own plan may differ, and the directions your surgeon and the hospital give you always come first.

A note on these pages

The information in this handbook is general and may not apply to your particular case. Always follow the specific directions and discharge materials given to you by your surgeon and the hospital. This handbook does not replace medical advice.

How to Reach Us

Before anything else, here is how to get hold of us — because knowing this in advance takes a great deal of worry out of the weeks after surgery.

OUR NUMBER

516-584-8710

Office hours: 8 AM to 4 PM Eastern time (5 AM to 1 PM Pacific), Monday to Friday. After hours, a serious problem still reaches one of our clinicians.

This number is not a substitute for 911. If you think you are having a medical emergency — chest pain, trouble breathing, heavy bleeding with dizziness, fainting — call 911 or go to the nearest emergency room, exactly as you would with any other medical problem.

How calling our office works

Our office uses a call transcription and routing system, so your message goes straight to the people who can act on it. You will not start with a general operator. Instead, you choose the department that best matches what you need and leave a short message. That message is transcribed and sent directly to that team. The person who calls you back already knows why you called and is ready to help.

After you choose an option, you will be asked to leave a voicemail. Please include:

- your name
- your phone number
- your email address
- the reason for your call

Speak slowly and clearly, especially when you give your number and email address. The message is transcribed, and we need to be able to read them.

Hearing a recording does not mean you have reached a dead end. Every message reaches our team:

- **During business hours (8 AM to 4 PM Eastern):** expect a reply within the same business day.
- **After hours or on weekends:** routine calls are returned the next business day. If it is a serious medical problem, say so clearly in your message. Our answering service will contact us, and one of our clinicians will call you back.

If you have not heard back and you are worried, call again. If your symptoms are severe or getting worse while you wait, do not wait for our reply. Call 911 or go to the nearest emergency room.

If you have a medical emergency

Call 911 first. Once you are safe and able to, let our office know so our clinical team is aware.

If you are not sure it is an emergency, call us first

This is worth reading twice, because it is one of the most useful things in this handbook.

For a concern that is not an immediate emergency, please call us before going to an emergency room or another medical service whenever you can. There are real reasons for this, and none of them is paperwork:

- **We can help you work out the right next step.** Some things that feel alarming after surgery can be a normal part of recovery: shoulder pain, bloating, a temporary increase in pain, or a slow return of bowel function. Our clinical team can help decide whether you need to be seen.
- **We can talk to the emergency room physician.** If you do need emergency care, we can give the treating doctor the surgical and clinical background directly.
- **We may be able to point you to the right emergency room.** Where possible, we can help you find a hospital where colleagues, or physicians familiar with your type of surgery, may be available.
- **We may help you avoid tests you do not need.** With context from us, the emergency team can focus on what actually needs checking, rather than on testing or imaging that is not clinically necessary.

None of this applies if something feels serious. If you have severe symptoms, or think it may be an emergency, call 911 or go to the nearest emergency room without waiting to reach us. Then let us know once you are safe, so we can help the emergency team understand your operation.

When in doubt, call us.

Who to email for what

Our team is organized by department, and patients have told us plainly that knowing who does what would have saved them a great deal of confusion. So here it is.

If you need...	Who	Email
Anything clinical — symptoms, post-operative concerns, medication refills	Clinical team	clinical@essidoctors.com
Scheduling your surgery, surgical paperwork and forms	Janice, Surgical Coordinator	surgery@essidoctors.com
Office appointments, administrative matters, insurance and billing	Front desk	frontdesk@essidoctors.com

THE TWO PEOPLE ASK ABOUT MOST

Medication refills go to the clinical team. Billing goes to the front desk.

Email is right for anything that can wait a day. For anything urgent, call — do not email.

Please allow 24 to 48 hours for an email reply during normal business hours. Our team answers most questions directly and brings in your surgeon whenever a question calls for it.

A note about cost

This handbook is about the medical side of your care, so we have deliberately kept fees and insurance out of it — those change, they differ from patient to patient, and they are handled far better in a conversation than on a printed page.

What we will say is this. We are committed to keeping this surgery accessible. We work with insurance wherever we can, our staff will verify your benefits for you rather than leaving you to decipher them, and where insurance does not cover it we have kept our fees deliberately at the lower end of what comparable practices charge. Coverage can be hard to interpret, and it often turns out better than patients expect — so please let us check before you assume anything.

For anything about insurance, benefits, or billing, contact the front desk at frontdesk@essidoctors.com or call the office. They will walk you through exactly what applies to you.

Start Here

Two things to keep close: the countdown to your surgery, and a quick way to find what you need once you are home.

Your countdown to surgery

When	What to do	Page
As soon as surgery is booked	Ask your primary care doctor about surgical clearance if you may need it. Tell us every medicine and supplement you take — we will give you a written plan. If you may want children and have an endometrioma, ask us about egg freezing. Arrange who drives you home and stays with you the first night.	21
Two weeks before	Stop herbal medicines and any aspirin you take on your own. Tell us about any new illness. Buy what you need from the shopping card.	21
One week before	Stop every GLP-1 medicine, weekly or daily, for diabetes or for weight (Ozempic, Wegovy, Mounjaro, Zepbound and others). Took a dose by mistake? Call us.	22
Five days before	Stop ibuprofen, fish oil, vitamin E, turmeric and iron. Blood thinners: follow your written plan.	22
The day before	Last solid food at 12 noon, then clear liquids only. Bowel prep if you were given one. Shower and wash your hair; no lotions afterward. First carbohydrate drink in the evening.	22
Morning of surgery	Second carbohydrate drink, finished 2 hours before your surgery time — then nothing by mouth. Bring this handbook, and give your companion the question card.	23
Once you are home	Tylenol and Motrin on schedule, walk often, check your temperature, and know when to call.	40

IF IT IS URGENT

Call us: 516-584-8710

If you think it may be an emergency — chest pain, trouble breathing, heavy bleeding with dizziness, fainting — call 911 or go to the nearest emergency room. For anything else that worries you, call us: we can usually tell you quickly whether it needs to be seen.

Find it fast

When something is worrying you and you do not want to read a hundred pages to find out whether it is normal: look down the left column, and turn to the page on the right.

If you are wondering about...	Turn to	Page
Medicines to stop before surgery	Before Your Surgery	21
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Questions to ask after surgery	Your update right after surgery	35
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Why We Are Different

Before we explain how we think and what we do, we want to tell you plainly why ESSI is not like other places — because choosing where to have endometriosis surgery may be the single most important decision you make about this disease, and you deserve to understand what sets us apart.

Expertise built over decades

Endometriosis surgery is one of the most demanding operations in gynecology. Done well, it requires a surgeon who can find disease hiding in plain sight, work safely around the bowel, bladder, ureters, and major nerves, and remove disease completely without sacrificing the organs and fertility you came in with. That level of skill is not common, and it is not quick to acquire. Our founder, Dr. Andrea Vidali, has spent more than 25 years doing this work, and is double board-certified as both a reproductive endocrinologist (a fertility specialist) and a reproductive immunologist, in addition to being a master excision surgeon. Our surgeons are not occasional endometriosis operators; this is what we do, all day, every day.

Three kinds of expertise under one roof

This is the part that may matter most. Endometriosis is not only a surgical disease — it is at the same time a fertility disease and an immune disease. Treating it at the highest level therefore calls for three different kinds of expertise that almost never live under one roof: master-level excision *surgery*, deep experience in *fertility* (reproductive endocrinology), and command of *reproductive immunology* — the science of how the immune system affects implantation, pregnancy, and the inflammation that drives this disease.

Very few centers bring all three of these together. Most endometriosis programs are surgical practices alone; a patient who also needs fertility care or an immune evaluation is sent elsewhere, to specialists who may never speak to the surgeon. At ESSI these three disciplines are not referred out — they are combined in one place, in one plan, and often in one person. That means we can remove your disease, protect and optimize your fertility, and address the immune and inflammatory environment that affects both your symptoms and your chance of conceiving — as a single, integrated approach rather than three disconnected ones. For patients who have been bounced between a surgeon, a fertility clinic, and no one at all for the immune piece, this combination is the whole difference.

A track record measured in results, not promises

We hold ourselves to outcomes, and we measure them. As we describe later in this handbook, at five years of follow-up we reoperate on about 8% of our patients — a figure from our own internal analysis, with the limits we explain there. Published reoperation rates are measured in many different ways, so we do not offer ours as a direct comparison; we share it because we think you deserve to see a number, not just a promise. The aim behind it is the theme of this entire guide: a complete first operation is the best protection against needing a second.

Volume, and why it matters to you

There is a well-established principle across all of surgery: volume drives outcomes. Surgeons and centers who perform a given operation often have lower complication rates, lower recurrence, and better results than those who do it occasionally. Endometriosis is no exception — it is a master of disguise, and recognizing and safely removing it is a skill sharpened by repetition.

Our group performs roughly 600 to 700 endometriosis surgeries every year. For a sense of scale, the United Kingdom's national accreditation body (the BSGE) asks an accredited endometriosis centre to perform at least 12 complex cases per surgeon per year.²⁷ Across surgery generally, higher volume is consistently linked with better outcomes,²⁸ and that experience is something we bring to every operation.

Why volume matters to you, specifically.

When a team has seen and removed disease in every location it can hide — on the diaphragm, the bowel, the bladder, the ureters, the nerves — hundreds of times a year, very little is unfamiliar. That is what lets us map your disease accurately, remove it completely, protect the structures around it, and handle whatever we find without stopping or sending you for a second operation.

This handbook itself is part of why

There is one more thing, and you are holding it. In reviewing what the world's leading endometriosis centers offer their patients, we found pre-operative checklists, recovery tip-sheets, dos-and-don'ts blog posts, books of patient stories, and textbooks written for other surgeons. What we did not find anywhere was this: a single, complete, honest, evidence-cited handbook that walks a patient through the entire journey — how we think about the disease, how we evaluate you, every procedure we may perform and why, how we communicate what we found, how to read your operative and pathology reports, exactly how to prepare and recover, and how we follow you for years afterward.

We wrote this because we believe being fully informed is part of good care — not an afterthought to it. A center confident in its work is willing to explain that work completely, including the parts that are easy to gloss over: how team-based care really operates, why we make the choices we make, and where the honest limits of the evidence lie. That transparency is itself part of what makes us different.

The pages that follow are that explanation. We are honored that you are considering trusting us with your care.

Who Will Be Looking After You

Endometriosis surgery at this level is not a one-person job, and we think you should know who is involved before you arrive rather than meeting everyone for the first time on the morning of your operation.

Our surgeons work across New York, New Jersey, Pennsylvania, Connecticut, Miami and Southern California. Which of them is involved in your care depends on where you are treated and on what your disease turns out to require — a case involving the bowel, for example, brings in a colorectal surgeon alongside your gynecologic surgeon, operating together in the same session rather than referring you on. Fuller profiles for everyone here are on our website. If you would like to know before surgery who is expected to take part in your operation, ask your surgical coordinator.

Your surgeons

Dr. Andrea Vidali — Founder and Director. A master excision surgeon who is also double board-certified as a reproductive endocrinologist and a reproductive immunologist — the combination that shapes how this whole practice approaches the disease. More than 25 years operating on endometriosis.

Dr. Mallory Stuparich. Fellowship-trained in minimally invasive gynecologic surgery, trained at UT Southwestern and Magee-Womens Hospital at UPMC, and the lead ESSI surgeon in Southern California. An expert in advanced robotic excision with a particular focus on fertility-sparing technique.

Dr. Osbert Fernandez. A high-volume excision specialist and advanced robotic surgeon, handling complex cases including deep infiltrating disease and large fibroids. Practices across New York, New Jersey, Florida and Pennsylvania.

Dr. Daniel Cibulsky. Board-certified in obstetrics and gynecology, specializing in minimally invasive and robotic-assisted excision, and known within our team for a deeply patient-centered way of working. Practices in New York, New Jersey and Connecticut.

Dr. Joseph Raccuia. A general and oncologic surgeon with more than 2,000 procedures behind him, who handles the wider abdomen — including extrapelvic disease in places gynecologic surgery alone does not reach.

Dr. Marco Zoccali. Colorectal surgeon on our New York team, whose focus is organ preservation in complex colorectal cases — removing disease from the bowel while sparing as much healthy bowel as possible.

Dr. Alessio Pigazzi. A globally recognized leader in robotic and minimally invasive colorectal surgery, based in California. For bowel disease on the West Coast, he and Dr. Stuparich operate concurrently — two specialists in the room at once rather than two operations months apart.

WHY MORE THAN ONE SURGEON

A solo gynecologist who finds disease invading your bowel often has to leave it there.

That is one of the most common reasons endometriosis is left behind at a first operation. Having colorectal and general surgeons on the team, in the room, is what lets us treat whatever we find in one sitting — and it is the reason you may meet several surgeons rather than one.

Vascular care

Dr. Jiyong Ahn — Vascular and Interventional Radiologist. A high-volume board-certified specialist serving the New York and New Jersey area, and our clinical partner for the vascular side of pelvic pain. Some of what causes pain in this disease is not tissue at all but veins — pelvic congestion, May-Thurner, Nutcracker — and those are treated from inside the blood vessel rather than through an incision. A gynecologist cannot do that work, and a vascular specialist does not excise endometriosis. Having both means neither half of your problem gets ignored because it fell outside somebody's specialty.

Working alongside them

Emanuela Lazzaroni-Tealdi, MS, CTSS — Senior Embryologist and Reproductive Biologist. Nearly twenty years in leading American IVF laboratories, and our Director of Support and Medical Education. She gives patients the perspective that is almost always missing from a standard consultation: the view from inside the laboratory. If you have had failed IVF cycles, confusing embryology reports, PGT results you do not understand, or you want to know how your endometriosis or adenomyosis may be affecting your fertility, she is who you speak to. She is also a Certified Trauma Support Specialist, which matters more in this disease than it might sound.

Dr. Sallie Sarrel — Physical Therapist and endometriosis counselor. A licensed physical therapist and certified athletic trainer, and a long-standing advocate in endometriosis care. Much of what remains after the disease is removed lives in muscle and in the nervous system, and her perspective informs how we think about that side of recovery.

And everyone you will not read about

Beyond the surgeons and consultants there is a larger team: our nurses, our surgical coordinator, our clinical staff, and the administrative team who handle your scheduling, paperwork, insurance and billing. In practice these are the people you will speak to most often — the ones who answer your call, arrange your date, chase your records, and sort out your benefits.

We mention them deliberately. Patients sometimes feel they are bothering the office by calling with a question that is not for the surgeon. You are not. Handling those questions is exactly what this team is for, and the earlier section on how to reach us tells you which of them to ask.

PART ONE

How We Think, and How We Work You Up

The ideas behind everything we recommend

How We Think About Endometriosis

A different starting point

Before we talk about what to do the week before your operation or the day after, we want you to understand how we think — because everything we recommend flows from one core idea, and that idea may be different from what you have been told before.

For most of its history, endometriosis has been treated as a disease of lesions: spots of tissue in the wrong place, to be found, staged, and cut out. Find the lesions, remove the lesions, and the problem is solved. That picture is not wrong, exactly — the lesions are real, and removing them properly matters enormously. But it is incomplete. And the gap between “incomplete” and “whole” is where a great deal of suffering has been allowed to live.

We believe endometriosis is bigger than its lesions. It behaves as a **system** — and it deserves to be treated as one.

Endometriosis is not new. The map is.

We want to be precise, because this can be misread. Endometriosis is not a new disease, and we are not inventing one. What is new is the map we use to understand it.

The old map asked a single question: *What stage is your disease?* The new map asks a better one: *Which systems are active in you, right now?*

Here is what we see, over and over, in real patients: the pain, the fatigue, the bloating, the bowel and bladder symptoms, the trouble getting or staying pregnant — these are not all explained by where the lesions happen to sit. They are produced by a set of overlapping systems that can each drive, amplify, or sustain what you feel.

The Pelvic Overlap Spectrum

We call this framework the **Pelvic Overlap Spectrum** — POSS for short — and you may hear us refer to it during your visits. It is a framework we developed from what we see in practice: a way of organizing your care, not a formal diagnosis.

Picture a map with *you* at the center, not the lesion. At the very middle sits the anchor: **endometriosis together with adenomyosis** (its close relative, found inside the muscular wall of the uterus). This inflammatory, hormone-responsive core sets the baseline that everything else unfolds around.

Radiating out from that anchor are the other systems that may also be in play for you:

- **the nervous system**, which can become sensitized and keep producing pain even after the disease itself is gone;
- **the autonomic system** — the source of a racing heart, lightheadedness, nausea, and fatigue;
- **the vascular system** — pelvic congestion and vein compression;
- **the immune system** — inflammation and allergic-type, mast-cell-driven reactivity;
- **connective tissue** — the more flexible, hypermobile body whose tissues behave differently;

- **the gut** and its microbiome;
- **the bladder** — urgency and painful filling;
- **bowel motility**;
- **and fertility and ovarian lifespan**, which the old map often got wrong.

This is *not* a checklist of new diagnoses to collect, and it does not mean you have all of these. Many patients have several active at once, each feeding the next. The point of the map is simply this: to identify **which systems are actually changing your life**, so we can treat those — instead of treating every patient as if she were identical.

“One disease, many different lives. That is the whole reason the map exists.”

Why this matters for your surgery

You might reasonably ask: if we believe in all these systems, why operate at all?

Here is our honest answer. We believe in surgery **completely**. Excision — removing the disease properly, at the root, by someone who can handle whatever is found — is the foundation of everything. Our philosophy does not argue for *less* surgery; it argues for a better plan built around the surgery.

This is the difference that protects you:

- **We map the disease before and during your operation**, rather than discovering it as we go.
- **Our technique is nerve-sparing and ovary-sparing by default** — we work to remove disease without sacrificing the nerves that matter or the ovarian reserve you may need.
- **We address the whole system in one plan** — the uterus, the nervous system, the inflammatory and immune picture, and your fertility goals — rather than fragmenting your care across people who never speak to each other.
- **And we give you time**: long consultations, a real reckoning with everything you have already tried, and a team that believes you.

That last point is not a courtesy. Much of the harm in this disease comes from women not being heard. Designing care so there is time to listen is not a luxury — it is part of the treatment.

“It came back” usually means “it was never fully removed”

One more idea, because it shapes why we are so careful. When endometriosis seems to “come back” after surgery, the cause is far more often an incomplete first operation than aggressive biology. Disease was left behind, burned at the surface instead of removed at the root, or the real driver — often adenomyosis — was never imaged or treated at all. It is not the only cause — the disease itself can recur, and pain can come from other systems on the map, such as a sensitized nervous system or a pelvic floor in spasm — which is why, if symptoms return, we reassess you properly rather than assume the answer.

The most effective way to prevent a second surgery is to do the **first one properly**: completely, with the right map, by someone equipped for whatever the disease turns out to be. That is the standard we hold ourselves to — and it is why your preparation and recovery are taken as seriously as the operation itself.

THE POINT OF ALL OF THIS

The best way to prevent a second surgery is a complete first one.

Almost everything in this handbook — the mapping, the team in the room, the way we prepare you and follow you afterward — exists to serve that single aim.

The ESSI Method

Everything above describes how we think. The ESSI Method is what we actually do — our surgical signature, the consistent set of principles that guides every operation we perform. It is, quite simply, the Pelvic Overlap Spectrum applied to surgery: we take the same map of overlapping systems that we use to understand your disease, and we carry it into the operating room. Think of it as a formula — one organizing principle, several systems we stay aware of, delivered together in a single combined operation.

The ESSI Method = the POSS system, applied to your surgery.

Patient-centric at the core — then **neural-aware, immune-aware, vascular-aware, adenomyosis-aware, urology-aware, and fertility-aware** care, combined into one operation by one team.

The formula, at a glance:

The ESSI Method	What we stay aware of in your surgery
Patient-centric (the core)	You are at the center of the map — not the lesion. The plan is built around your symptoms, your goals, and your life.
Neural-aware	The nerves: nerve-sparing dissection, freeing entrapped nerves, quieting the pain loop.
Immune-aware	Inflammation and immune reactivity (including mast-cell / MCAS), before, during, and after surgery.
Vascular-aware	Blood vessels: relieving veins that compress nerves, and tissue-sparing control of bleeding.
Adenomyosis-aware	The uterus itself — treating adenomyosis, often with uterus-sparing options.
Urology-aware	The bladder and ureters — protected, inspected, and repaired as needed.
Fertility-aware	Your reproductive future — ovary-sparing and fertility-preserving by default.

Patient-centric — the core

Everything starts here. As in the Pelvic Overlap Spectrum, *you* sit at the center of the map — not the lesion. The operation is designed around your particular pattern of symptoms, your fertility and life goals, and everything you have already been through. Much of the harm in this disease comes from women not being heard, so building care around the patient — with time to listen and a team that believes you — is not a courtesy. It is the foundation the rest of the method is built on.

Neural-aware

We treat endometriosis as a **neurocentric** disease — one that lives in and acts on the nervous system, not merely a scattering of lesions. Endometriosis interacts directly with nerves, neuroinflammation, and pain pathways, and that wiring is often why pain persists. So our surgery is built around the nerves: we use nerve-sparing, retroperitoneal dissection to navigate and protect the delicate nerves of the pelvis (such as the hypogastric nerves), we free nerves that disease or scar has entrapped (neurolysis), and we remove the disease driving the pain at its root rather than burning its surface. The goal is to quiet the pain loop, not just clear the pelvis.

Immune-aware

Endometriosis is a systemic, inflammatory, **immune** disease — not only a local one. Our founder is a reproductive immunologist as well as a surgeon, and that lens shapes the whole approach: we recognize that the disease is fed by immune dysregulation and inflammation, and that for many patients an allergic-type, mast-cell-driven reactivity (including conditions like MCAS) is part of the picture. We account for this before, during, and after surgery — from how we plan around sensitive, reactive tissue to how we think about cooling systemic inflammation as part of lasting relief.

Vascular-aware

Veins are part of the same map, and they are one of the most consistently missed pieces of it. The principle is simple: a vein squeezed somewhere upstream backs up everywhere downstream. In the pelvis, where veins run alongside nerves through tight corridors, a congested vein can press on the nerve beside it. That is why the same patient can have both a heavy, dragging ache that is worse after standing all day and a burning nerve pain that is worse sitting down.

Three patterns account for most of this, and we look for them specifically:

- **Pelvic venous disease (pelvic congestion).** Enlarged, incompetent pelvic veins — most often the gonadal, or ovarian, veins — that pool blood in the pelvis. The classic story is a deep ache that builds through the day, eases when lying down, and is often worse around your period.
- **May-Thurner.** Compression of the left iliac vein where an artery crosses over it, low in the pelvis. Because it obstructs outflow from the left leg and pelvis, it can cause left-sided pelvic pain, left leg swelling or heaviness, and it raises the risk of blood clots.
- **Nutcracker.** Compression of the left renal vein between two arteries, higher up. It can cause left flank pain and blood in the urine, and it often drives pelvic congestion downstream.

These are not obscure curiosities. They are common in exactly the patients we see, they explain symptoms that excision alone will not fix, and they are routinely missed because standard pelvic imaging is not designed to find them.

Enlarged pelvic veins — in particular the gonadal (ovarian) veins — can compress the nerves running into the pelvis and leg and drive pain, and pelvic congestion can contribute to symptoms on its own. When we find vessels compressing a nerve, we relieve them (ligating them where appropriate), and throughout the operation we control bleeding with tissue-

sparing precision rather than broad cautery that would burn healthy tissue and nerves nearby.

Adenomyosis-aware

Adenomyosis — endometriosis's relative **within the muscular wall of the uterus** — is one of the most overlooked drivers of pain and infertility, and it sits at the very center of our map alongside endometriosis. A surgery that clears the pelvis but ignores the uterus often leaves the real engine of the pain untreated, which is a common reason symptoms seem to “come back.” So we look for adenomyosis, image it, and treat it — increasingly with uterus-sparing options such as microwave ablation rather than reaching first for hysterectomy. Treating the uterus, not just the lesions around it, is central to the method.

Urology-aware

The **bladder and ureters** run right through the territory endometriosis invades, so urology is built into every operation. We begin by looking inside the bladder (cystoscopy) and protecting the ureters with stents and ICG dye so they glow and stay safe throughout. We free ureters that disease has tethered (ureterolysis), excise disease from the bladder and repair it, and — when the ureter is deeply involved — reconnect or reimplant it. The bladder is also a major source of symptoms in its own right, which is why bladder-directed treatment (including Botox, where indicated) is part of the plan.

Fertility-aware

Because our practice is led by a reproductive endocrinologist, **fertility preservation is our default**, not an afterthought. Every choice is weighed against your reproductive future: we spare the ovary rather than strip it (protecting your ovarian reserve and AMH), we favor tissue-sparing techniques over destructive ones, and where adenomyosis threatens fertility we reach for uterus-sparing options before considering anything that would end it. For patients who want to conceive, the surgery is designed to restore the anatomy *and* the biological environment that give natural conception or IVF the best possible chance.

The combined approach — and the neuromuscular piece

Finally, much of the pain that endometriosis leaves behind lives in **muscle** — a pelvic floor locked in spasm, a bladder that has become overactive, a uterus that cramps. Removing the disease alone does not always release these. So the ESSI Method treats the neuromuscular component in the same sitting: where indicated, we combine excision with targeted measures such as Botox to the pelvic floor, the bladder, or the uterus, calming the overactive muscle at the same time we remove the disease that provoked it.

This is what we mean by a combined approach: rather than fragmenting your care across people and procedures that never meet, every part of the formula is delivered together, in one operation, by one team — so the whole disease is treated at once.

Why we give it a name.

We call this the ESSI Method because it is consistent and deliberate — not a different improvised operation each time, but a defined standard you can expect from us: our Pelvic Overlap Spectrum, carried into the operating room. When you hear us refer to the ESSI Method during your visits, this is what we mean — patient-centric care that stays neural-aware, immune-aware, vascular-aware, adenomyosis-aware, urology-aware, and fertility-aware, combined into one.

How We Work You Up

Good surgery begins long before the operating room. The work-up is where we build the map that makes your surgery precise — and, we hope, your last. Here is what that involves.

The consultation: time to be heard

Your first visit is built around listening. We take a full history — not only of your periods and pelvic pain, but of the whole picture: the bowel and bladder symptoms, the fatigue, the headaches or dizziness, the history that often stretches back years before anyone said the word “endometriosis.” We want to understand everything that has been tried before, what helped, and what did not. This is how we begin to see which systems are active in you.

Endometriosis mapping

Endometriosis lesions come in a wide variety of shapes, colors, sizes, and locations — and everyone’s disease is different. Rather than discovering your disease as we operate, we map it beforehand. Using advanced imaging, we chart the location, size, and depth of disease throughout the pelvis and beyond, and build a surgical strategy specific to you.

This mapping is especially important for **deep infiltrating endometriosis** and for disease that appears in several places at once — the bowel, the bladder, the ureters, the diaphragm. It means both you and your surgeon know what to expect, so that your first surgery has the best chance of also being your last.

A negative scan does not mean nothing is wrong. Many patients arrive having been told their MRI or ultrasound was normal despite real symptoms. Imaging is one tool among several; your history and examination matter just as much.

Looking at the whole system

Because we treat endometriosis as a system, the work-up looks beyond the lesions. One part of it is worth calling out, because patients are rarely offered it: if your story suggests a venous problem — a heavy ache that builds through the day, left-sided pain, one leg that swells — we look at the veins directly. That takes dedicated imaging such as a venous duplex ultrasound or a CT or MR venogram. A standard pelvic ultrasound or MRI does not answer the question, which is the main reason these conditions go unrecognized for years.

Depending on your symptoms, we consider:

- **Adenomyosis** — disease within the wall of the uterus, which can drive bleeding, pain, and trouble with implantation, and which is often missed entirely.
- **The pelvic floor and nervous system** — because muscles that have guarded for years, and a sensitized nervous system, can be their own source of pain.
- **Fertility and ovarian reserve** — evaluated early, because protecting egg number is part of protecting your future.
- **The immune and inflammatory picture** — including mast-cell-pattern reactivity and, where relevant, recurrent miscarriage and implantation history.

- **The bladder, bowel, and other overlapping systems** — assessed carefully rather than mislabeled.

Fertility and immunology, under one roof

One thing that sets our approach apart is that fertility and the immune and hormonal picture are evaluated alongside the surgery, not referred out to be handled separately. Because our founder trained as a reproductive endocrinologist and reproductive immunologist as well as a surgeon, we can treat the arms of this disease that most programs cannot see — IVF planning, post-surgical pregnancy, recurrent miscarriage, and hormonal dysfunction — as part of one coordinated plan.

By the time you reach the operating room, we aim to have a clear, individual picture: what disease is present, where it is, which systems are driving your symptoms, and what your goals are. That picture is what makes the surgery precise.

The Surgery Itself

The key to a successful endometriosis surgery is **complete excision** — cutting out the disease at its roots. This is the single best way to control endometriosis and reduce the chance it returns. Below is how we approach the operation.

Endometriosis is a nerve-centric disease

The pelvis is one of the most densely wired regions in the body, and endometriosis lives among those nerves. That is why our surgical approach is built around the nervous system. When indicated, we use four complementary nerve strategies in the same operation — they are partners, not alternatives.

1. Complete excision — remove the disease completely

- Every visible lesion removed.
- Deep infiltrating disease taken to clean margins.
- Bowel, bladder, ureter, diaphragm, and thoracic disease treated when present.
- No skimping. No surface ablation.

2. Nerve sparing — preserve what excision could damage

- The pelvic nerve network is identified and protected.
- The nerves governing bladder, bowel, and sexual function are safeguarded.

3. Neurolysis — release a nerve trapped by disease

- Sacral, sciatic, obturator, and pudendal nerves freed from disease.
- Addresses conditions such as sciatic endometriosis and pudendal entrapment.

4. Neuromodulation — quiet the pain pathways

- Botulinum toxin, precisely placed into the spasming pelvic floor (or bladder).
- For pelvic-floor, bladder, anorectal, or vulvar pain with a guarding component.
- Performed under the same anesthetic as the surgery itself.

Why treat the muscles during surgery? In many patients with endometriosis pain, the pelvic-floor muscles have been guarding for years and do not simply unclench once the lesions are gone. We believe treating both pain generators — the disease and the muscle spasm — under one anesthetic gives your recovery the best chance. The evidence for this combined approach is still developing, and we explain it honestly in the section on Botox.

Excision versus ablation — and the one place we do the opposite

There are two broad ways to treat an endometriosis lesion: cut it out completely (excision) or destroy it in place with energy (ablation). For almost all endometriosis, the answer is clear.

Excision is our standard — and what we do. Removing disease at its roots, rather than burning only its surface, is the most reliable way we know to treat it completely and reduce the chance it returns. The European guideline (ESHRE) also suggests that surgeons consider excision rather than ablation to reduce endometriosis pain — a cautious recommendation, because the trials comparing the two are few and small.¹³ Ablating the surface can leave deeper disease behind — a frequent reason endometriosis seems to “come back.”

So as a rule, we excise. There is, however, one important exception — and it is exactly the place where doing the “standard” thing can quietly cost you something precious.

The ovary: where sparing reserve changes the rule

Some patients are told before surgery that they “may lose an ovary.” Our approach is the opposite: to preserve ovarian tissue, and the eggs within it, wherever it is safe to do so — especially for anyone who wants future fertility or is planning IVF.

Here is the problem with stripping an endometrioma. An endometrioma (an ovarian cyst of endometriosis) does not have a clean peel-away plane like other cysts. When the cyst wall is stripped out (cystectomy), healthy ovarian tissue — containing eggs — is very often removed or damaged along with it. The result is a measurable loss of ovarian reserve.

How much reserve is at stake. Pooled studies show that stripping causes a substantially larger drop in AMH than ablation does.¹⁴ (AMH is a blood marker of egg supply — a useful guide, not a direct count of your eggs or a promise about pregnancy.) For a woman having both ovaries operated on, bilateral stripping can lower AMH by about 44%.¹⁵ That is a large amount of a finite, non-renewable resource to spend — and once it is gone, it does not come back.

What we do instead: argon beam coagulation. For the endometrioma itself, rather than stripping the ovary we treat the cyst lining with **argon beam coagulation** — a controlled, shallow ablation that destroys the disease while sparing the underlying healthy ovary and its eggs. It is a deliberately gentle, surface-level technique, and it is the heart of our ovary-sparing approach.

The evidence — including a within-patient study

One of the most informative pieces of evidence comes from a study design that removes much of the guesswork: a within-patient trial. In women who had endometriomas on both ovaries, surgeons treated one ovary by ablation (using a CO2 laser, a different energy source from the argon we use) and the other, in the same patient, by stripping — then compared the two.¹⁶

- **The ablated ovary kept significantly more reserve** — higher ovarian volume and a higher antral follicle count than the stripped ovary in the same woman.
- **Because both ovaries are in one patient**, age, hormones, and biology are identical on both sides — which isolates the effect of the technique far better than most studies can. It is a small pilot study (16 women), it used CO2 laser rather than argon, and we would not rest the argument on it alone; what makes it valuable is its design.

Larger pooled analyses agree: across randomized trials, ovarian reserve (AMH) is significantly better preserved after ablation than after cystectomy.¹⁴

An honest word on recurrence. We should be straightforward here, because the evidence is not all in one direction. The pooled analysis of randomized trials does report endometriomas recurring somewhat more often after ablation than after stripping, and that is the traditional argument for cystectomy. Those trials largely used older, cruder energy, and the more recent studies using modern controlled ablation have found no significant difference in recurrence. What is clear and consistent across all of it is the advantage in protecting ovarian reserve. So the honest summary is a trade-off rather than a clean win: for a patient whose priority is preserving fertility, we think it favors sparing the ovary — and it is a decision we make with you, knowing both sides.¹⁴

Why this matters — and why ESSI does it

The international picture is mixed, and we want you to know it. The European guideline recommends cystectomy over simple drainage and coagulation, mainly because of recurrence, while accepting CO2 laser vaporization — another ovary-sparing energy technique — as a reasonable alternative.¹³ Our argon approach belongs to that ovary-sparing family. Many surgeons, particularly in the United States, default to stripping; we weigh the reserve it costs more heavily. Protecting ovarian reserve is central to how we think. Because our founder is a reproductive endocrinologist and immunologist as well as a surgeon, your fertility is weighed in the operating room, not as an afterthought — and for the right patient, sparing the ovary is simply part of doing this surgery well.

Adenomyosis and the uterus

Where adenomyosis is part of your picture, a hysterectomy is not the only answer — and for anyone who wishes to keep her uterus, it is often not the right one. Increasingly, adenomyosis can be treated with uterine-sparing approaches that address the disease while leaving the uterus intact. Whether and how this applies to you depends on your imaging and your goals, and we will discuss it directly.

Does Stage 4 disease mean I need a hysterectomy?

No. The goal of surgery is complete excision of disease wherever it sits. A hysterectomy treats uterine conditions such as adenomyosis — it does not remove endometriosis from the bowel, bladder, or ovaries. That decision is separate, and is made only after a full discussion of your symptoms and fertility goals.

What about recurrence?

The high recurrence rates often quoted — 40 to 50 percent within five years — are often tied to incomplete surgery or superficial ablation that leaves deeper disease behind. No surgeon can promise zero recurrence, but in our experience the rate after thorough, complete excision is much lower — and if your symptoms do return, we reassess you rather than assume. Our entire philosophy rests on this: remove the disease in its entirety, the first time.

How We Manage Your Pain and Recovery

How a surgical team controls pain around an operation often makes the difference between a miserable recovery and a smooth one — and much of it happens in choices you never see. Our approach borrows a principle from orthopedic surgery, where opioid-sparing pain control is far more advanced than it has traditionally been in gynecology: we block the pain before it ever starts, and we blunt it from several directions at once.

Our enhanced-recovery (ERAS) approach

- **Block the pain before it starts.** We treat endometriosis surgery the way orthopedic surgeons treat a major joint operation — with regional anesthesia placed before the first incision: a TAP block that numbs the abdominal-wall nerves and, for some patients, a spinal injection of long-acting morphine (which means staying overnight — see “Our special pain protocol”). Because the pain pathways are quieted before the first incision, we can use far less narcotic during the operation — which means less nausea and a clearer-headed, more comfortable wake-up.
- **Keep the gas pressure low.** Minimally invasive surgery requires inflating the abdomen with carbon dioxide, and the pressure used is a major cause of the shoulder-tip pain that surprises so many patients. We deliberately use a low-pressure technique — about 10 mmHg rather than the more common 12 — which has been shown to significantly reduce shoulder pain and the need for extra painkillers, without compromising the surgery.
- **A multimodal medication ladder.** Rather than reaching for opioids, we run several non-opioid medicines on a schedule, each addressing a different pain mechanism — with acetaminophen and ibuprofen as the backbone, a muscle relaxant for spasm, and newer non-opioid options for breakthrough pain. Opioids are reserved for breakthrough pain only — the exception, not the foundation.
- **Nausea is treated as a priority,** not an afterthought — because controlling nausea is as important to recovery as controlling pain.

Recovery happens in phases

Your recovery is a system too, and the work is different at each stage. Understanding the arc helps you prepare for what each week asks of you.

Phase	What it is for
Before surgery (2–4 weeks prior)	Arriving strong and prepared: good nutrition and protein, hydration, a regular bowel pattern, reviewing every medication and supplement, and arranging help for the first week.
Early recovery (days 1–14)	Controlled, protected healing: pain and nausea control, preventing constipation, protein and fluids, gentle walking begun right away, and watching for warning signs.

Phase	What it is for
Mid recovery (weeks 2–6)	Rebuilding and normalizing: returning to normal eating, completing any medication taper, restoring bowel regularity, and pacing activity back up.
Remodeling (weeks 6–12)	Returning to your life: full activity and work, long-term nutrition, and an honest review of any lingering pain or symptoms — flagging it rather than enduring it.

The single most useful thing you can do: protein. Healing tissue is built from protein, and most people simply do not eat enough around surgery — especially when appetite drops. Food first, with a protein shake to fill the gap when eating is hard. Hydration, early gentle walking, and staying ahead of constipation are close behind.

PART TWO

Your Surgery, Step by Step

Preparing, the day itself, and your recovery

Before Your Surgery

Thank you for choosing to have surgery with us. Your care is our top priority. To give you the best possible experience and outcome, please review and follow the instructions below carefully. Some instructions may not apply to your case — your surgeon will tell you what is specific to you. If you may want children in the future and have an endometrioma, ask us about egg freezing as early as possible — the best time is usually before surgery (see “Egg freezing” in the Follow-Up chapter).

YOUR MEDICINES BEFORE SURGERY

We will review every medicine and supplement you take, and give you a written plan.

Do not stop a prescribed blood thinner or aspirin because of anything in this handbook alone. If your instructions differ from what you read here, or you have not received a plan, contact the clinical team before changing any dose.

Starting two weeks before surgery

ARRANGE THIS NOW, NOT LATER

The hospital will call you about a week before surgery, and may ask for a clearance form from your primary care doctor.

That call goes through a detailed health history, and depending on your medical history the hospital may require written surgical clearance from your primary care physician — sent to them promptly. Contact your own doctor now to get that appointment in the diary. Clearance visits can take a week or two to obtain, and patients who wait for the hospital to ask end up scrambling in the last few days before surgery. If you are told you need it, let our surgical coordinator know at surgery@essidoctors.com and we will help.

- **DO** stop herbal medicines, and any aspirin you take on your own (for headaches, for example). If a doctor prescribed aspirin for your heart, blood vessels or clotting, keep taking it until we have given you a plan.
- **DO** notify our office immediately if you develop any medical problem in the week before surgery (cold, fever, cough, urinary tract infection, and so on).
- **DO** notify your surgeon of any new or previously unreported medical condition that could affect your surgery, anesthesia, or recovery, so that special arrangements can be made.
- **DO** tell us if you take any of these, because each needs its own plan: insulin or other diabetes medicines (including GLP-1 medicines such as Ozempic, Wegovy, Mounjaro or Zepbound, which are also stopped a week before surgery, as explained below, and SGLT2 medicines such as Jardiance or Farxiga); steroids; seizure medicines; buprenorphine (Suboxone) or regular opioid pain medicine; sleep medicines; and cannabis, including edibles. Telling us is about safety, not judgment.

Starting one week before surgery

- **Stop every GLP-1 medicine at least one week before surgery.** This applies whether you inject it once a week or take it every day, and whether you take it for diabetes or for weight: Ozempic, Wegovy, Rybelsus, Mounjaro, Zepbound, Trulicity, Victoza, Saxenda, and compounded semaglutide or tirzepatide. These medicines slow how quickly your stomach empties, so food can still be in your stomach after a normal fast — and anesthesia with food in the stomach is dangerous.³⁷
- **If you take it for diabetes, tell us as soon as surgery is booked.** Stopping it can raise your blood sugar, so your prescribing doctor may need to adjust your other diabetes medicines for that week.
- **If you take a dose during that week by mistake, call us before the day of surgery.** Do not simply come in: we may need to change the anesthesia plan or move your date.
- **Ask us when to restart it** after surgery.

Some newer guidance lets most patients keep taking these medicines right up to surgery. We take the more cautious approach: the risk they guard against — stomach contents reaching the lungs under anesthesia — is rare but serious, and a week without the medicine is a small price for removing it.

Starting five days before surgery

- **Blood thinners (such as Eliquis, Xarelto, warfarin or Lovenox): follow your written plan.** When to stop depends on the medicine, why you take it and your kidney function, so there is no single rule — and some patients need a bridging plan. Do not stop on your own.
- **Stop supplements that can reduce clotting,** such as fish oil, high-dose vitamin E and turmeric.
- **Stop ibuprofen (Motrin, Advil) and other anti-inflammatory painkillers 5 days before surgery.** They increase bleeding during the operation. You will take ibuprofen again afterward — it is a central part of your pain plan — but not before.
- **Stop all iron supplements.**
- **Metformin:** if you take metformin (such as Glucophage or Glumetza) or a medication containing it (such as Janumet), do not take it the day before or the day of your procedure.

The day before your procedure

- **DO** take a bath or shower and wash your hair the night before. Wash your belly button very carefully — one of your incisions will be made there, so cleanliness matters.
- **DO NOT** drink alcohol — it increases anesthesia risk by delaying stomach emptying.
- **DO NOT** smoke — this allows for a smoother anesthesia course.
- **DO NOT** use perfumes or talc — they can irritate surgery sites and affect healing.
- **DO NOT** use any lotions or oils on your skin after your last shower before surgery.
- **Last solid food at 12 noon the day before surgery.** After that, clear liquids only for the afternoon and evening.

THE DAY BEFORE SURGERY**No solid food after 12 noon.**

It is extremely dangerous to have anesthesia with food in your stomach. If you eat after noon, your surgery may have to be postponed — so this one is worth setting an alarm for.

Clear liquids are different — and they help you.

You may drink **clear liquids up to 2 hours before your scheduled surgery time** — water, clear apple juice, black coffee or tea with no milk or creamer, clear sports drinks, and the carbohydrate drink described below. Unless you have been told to limit fluids for a heart or kidney condition, drink freely: staying well hydrated right up to that 2-hour mark makes your anesthesia and recovery smoother. Not allowed: milk or creamer, juice with pulp, smoothies, protein shakes, alcohol, or anything you cannot see through. Stop everything by mouth 2 hours before your surgery time.

The pre-surgery carbohydrate drink

Going into an operation after a long fast is harder on the body than most people realize. Fasting flips your metabolism into a starved state, and you wake up more insulin-resistant, more nauseated, thirstier and more uncomfortable than you need to be. There is a simple and well-established way to avoid most of that: a clear carbohydrate drink shortly before surgery.

This is not a supplement or a wellness product. It is a standard part of enhanced recovery protocols, supported by the American Society of Anesthesiologists and the ERAS Society and adopted into enhanced recovery pathways in gynecologic surgery. Patients who do it have more stable blood sugars afterward, less nausea, less anxiety and thirst going in, and in several studies a shorter stay.

What to buy

Any of the following work. You do not need a prescription and they are widely available online.

- **Ensure Pre-Surgery Clear Carbohydrate Drink.** Made for exactly this purpose and the easiest to find.
- **ClearFast PreOp.** The same idea, a different brand.
- **Nutricia preOp.** The formulation used in many of the studies behind this practice.
- **Or a full-sugar sports drink.** If you would rather not buy a branded product, about 10 ounces of regular Gatorade or Powerade will do, though it carries less carbohydrate than the purpose-made drinks — not the sugar-free or “zero” versions, which contain no carbohydrate and defeat the purpose. Choose any color except red or purple, which can look like blood if you happen to bring it back up.

When to drink it

1. The evening before surgery, drink one serving with your other clear liquids.
2. On the morning of surgery, drink a second serving — finishing it at least 2 hours before your scheduled surgery time. Many patients find it easiest to drink it just before leaving the house.
3. Nothing by mouth after that 2-hour mark.

IF YOU HAVE DIABETES

Ask us before using a carbohydrate drink.

It should be avoided if you have type 1 diabetes. For type 2 diabetes the evidence increasingly suggests it is safe, but this is a decision to make with us rather than on your own — so tell us, and we will tell you what to do.

This is a recommendation, not a requirement. If you would rather not, nothing is lost — drink water and follow the fasting instructions as written.

Your bowel preparation

If your surgery requires a bowel prep, please follow these instructions. All supplies are available over the counter:

- Bisacodyl (Dulcolax) 5 mg tablets — you will need 2
- Polyethylene glycol (MiraLAX)
- 64 ounces of any clear liquid — a sports drink such as Gatorade or Powerade is a good choice, as it replaces electrolytes. If you are diabetic, use only sugar-free clear liquids.

Starting your prep — the day before your procedure

Mix all 238 grams of MiraLAX powder into your 64 ounces of liquid at room temperature until fully dissolved. You may chill it afterward — many find it tastes better cold.

1. Do not eat any solid food after 12 noon.
2. At 4:00 pm, take 2 bisacodyl 5 mg tablets (10 mg in total) by mouth with a full glass of water.
3. At about 4:15 pm, begin the first half of your MiraLAX mixture: one 8-ounce glass every 15 minutes for four glasses (4:15, 4:30, 4:45, and 5:00 pm). Bowel movements often begin within an hour, but may take longer.
4. At 7:00 pm, drink the second half the same way — one 8-ounce glass every 15 minutes until finished.
5. Keep drinking clear liquids afterward to stay hydrated. You may continue clear liquids, including your carbohydrate drink, until 2 hours before your surgery time — then nothing by mouth.

Applying a barrier ointment such as petroleum jelly (Vaseline) or A&D to the skin around the anus after each bowel movement can help prevent irritation.

If you vomit the prep, or it does not seem to be working, call us — do not simply skip it or take extra.

What to obtain before surgery

We recommend that all patients have the following on hand at home before they go in, so that nobody is sent to a pharmacy on the first day (unless you are allergic to one of them).

Medications

- Ibuprofen 200 mg tablets
- Acetaminophen 500 mg tablets
- Simethicone 125 mg tablets, for gas pain
- Colace (docusate) 100 mg tablets, stool softener
- Miralax (polyethylene glycol)
- Dulcolax 10 mg suppositories
- **A thermometer.** We ask you to track your temperature after surgery, which is difficult without one — and surprisingly often there is not a working thermometer in the house. Buy a simple oral one and keep it by the bed.

For comfort

- **A small firm pillow.** Held against your abdomen when you cough, sneeze, laugh, or get in and out of a car, it braces the incisions and makes all of those dramatically less unpleasant. Of everything on this list, patients thank us for this one most.
- **Extra pillows, or a wedge.** Many patients are far more comfortable sleeping propped up for the first week or two than lying flat.
- **A heating pad.** Good for gas pain and for the shoulder pain that surprises people on day two.
- **Loose, high-waisted clothing.** Nothing with a waistband that sits across your incisions, and buy underwear a size up. You will be more swollen than you expect.
- **Slip-on shoes.** Bending to tie laces is the specific movement you will not want to make.
- **Lip balm and dry shampoo.** Small things. Fasting and anesthesia leave your lips dry, and a proper shower is tiring in the first days.

Food and drink

- **Protein drinks or shakes.** For the days when appetite is poor and eating a meal feels like work. Protein is the nutrient that matters most for healing.
- **Your carbohydrate drink for the morning of surgery.** See the section above — buy it in advance rather than the night before.
- **Peppermint or ginger tea.** Genuinely helpful for gas and for mild nausea, and pleasant when nothing else appeals.
- **Easy food that needs no cooking.** Standing at a stove is more tiring than it sounds in week one.

One thing to skip: drinking through straws, and fizzy drinks. Both make you swallow air, and trapped gas is already one of the main sources of discomfort in the first days.

Sensible extras

- Sanitary pads — not tampons, for six weeks.
- A pill organizer, or simply a written medication chart. Whoever is helping you will use it more than you will.
- A notebook for questions as they occur to you, so you are not trying to remember them at your follow-up.
- A fragrance-free moisturizer or silicone gel, for scar massage from around week two or three.

How we prevent nausea

Nausea after anesthesia and surgery is one of the most common things patients worry about — and we take it seriously. Rather than waiting to treat nausea after it appears, we work to prevent it from several directions, before, during, and after your surgery.

- **Before surgery — tell us if you are prone to nausea.** This is important: if you have a history of nausea after anesthesia, motion sickness, or nausea in pregnancy, please let us know in advance. For patients who are prone to it, we can prescribe a medication called **aprepitant**, a very effective anti-nausea drug that you take with a small sip of water about **2 hours before your surgery** — an exception to the nothing-by-mouth rule, like any morning medicines your written plan tells you to take — and only if we have prescribed it. It works best when taken ahead of time, which is why we need to know your history early. Aprepitant can make hormonal birth control less reliable for about a month afterward, so use a backup method such as condoms during that time.
- **A scopolamine patch.** Many patients receive a small skin patch behind the ear that releases anti-nausea medication steadily through the surgery and into recovery.
- **During surgery.** Your anesthesia team gives additional anti-nausea medications while you are asleep, as part of a deliberate, multi-layered plan to keep you comfortable on waking.
- **After surgery — ondansetron (Zofran).** You will go home with Zofran, which you can take for nausea during your recovery (see your pain-management instructions). You can take it alongside your other medications to head nausea off before it starts.

One thing we need from you: if you have ever had bad nausea after surgery or anesthesia, tell us before your surgery date so we can add aprepitant to your plan. The earlier we know, the better we can prevent it.

Preventing blood clots

Any major pelvic operation temporarily raises the risk of a blood clot forming in a deep vein of the leg (a deep vein thrombosis), which in rare cases can travel to the lungs. It is uncommon,

and it is largely preventable — so we want you to know both what we do and what you can do.

In the hospital, you will wear compression sleeves on your legs during and after the operation, and we will have you up and walking as soon as it is safe. Early movement is the single most effective thing that happens.

At home

- **Keep walking.** Short, frequent walks from the day you get home do more to prevent clots than anything else available to you.
- **Do not sit still for long stretches.** If you are working at a desk or watching something, get up and move every hour or so, and flex your ankles up and down while you are seated.
- **Stay well hydrated.** Dehydration thickens the blood and makes clots more likely.
- **Tell us if you have a clotting history.** A previous blood clot, a known clotting disorder such as Factor V Leiden, or a family history of clots all change our plan — so tell us before surgery, not after.

CALL US — OR 911

Pain, swelling, or tenderness in one calf: call us right away. Sudden shortness of breath or chest pain: call 911.

One leg that is swollen, warm, or painful when the other is not is the classic sign of a clot. Sudden breathlessness or chest pain needs the emergency room immediately, not a phone call.

If you are traveling for surgery

If you are flying in for your surgery, please consult with us before booking your return flight. Every recovery is different, and we will help you choose the safest time to travel. We strongly recommend flexible (“flexi”) fares that let you change your dates.

Flying after surgery deserves a little planning, because sitting still for hours and recent surgery both raise clot risk, and together they matter more than either alone. For your flight home:

- **Wear graduated compression stockings.** Below-the-knee, properly fitted, providing 15–30 mmHg of pressure at the ankle. These are available at any pharmacy — buy them before you travel, and ask the pharmacist to fit you rather than guessing at the size.
- **Get up and walk every one to two hours.** Book an aisle seat if you can, so getting up is easy and you actually do it.
- **Work your calves while seated.** Flex your ankles up and down and press the balls of your feet into the floor every so often — the calf muscles are what pump blood back up the leg.
- **Drink water, and skip the alcohol.** Both matter more on a plane than they do at home.

BEFORE YOU BOOK**Tell us how long your flight is, and whether you have any history of blood clots.**

Some patients need more than the measures above, and a few need a blood-thinning injection before flying. That depends on the length of your flight, your own risk factors, and what was done in your operation — so it is a decision we make with you rather than a rule we can print. Please do not start aspirin or any blood thinner on your own to prevent a clot; it is not the right choice for most patients after surgery and it carries its own bleeding risk.

If you are driving a long distance home, the same principles apply — stop every one to two hours and walk for a few minutes. Let us know so we can give you specific guidance at discharge.

The Day of Your Surgery

Arriving at the hospital

Someone from the hospital will call you the evening before to confirm your arrival time — usually about two hours before your procedure. Please remember that your scheduled time is a requested time and can shift with the hospital's schedule. Here is what to expect when you arrive:

1. **Go to registration.** When you arrive, report to registration or Same Day Surgery as directed and let them know you are scheduled for a procedure with us. Be prepared for this to take a while — there are a number of forms to complete and sign, it takes roughly twenty minutes per patient, and if there are people ahead of you it can take considerably longer. An hour or more is not unusual. This is normal and it is built into the schedule: you will not lose your slot or miss your pre-operative bloodwork because registration ran long. Arrive at the time you were given, bring something to read, and try not to let the wait alarm you.
2. **Go to the pre-operative unit.** You will be taken to the pre-operative area to get ready for surgery. A family member or friend may come with you and stay with you there.
3. **Meet your nurses and prepare.** The nursing staff will go over everything with you, start your IV, and complete any required pre-operative blood work. You will also meet your anesthesiologist, and members of the surgical team will review your procedure and answer any remaining questions.
4. **Review and sign your consent** (see below).

Waiting can be one of the most frustrating parts of the day. Occasionally a surgery is delayed because the case before yours ran long or an emergency case took priority. We know this is hard when you are hungry and anxious, and we do everything we can to stay on time. Bringing a book, magazines, or music can help the time pass.

Your surgical consent

Before surgery, in the pre-operative area, you will review and sign your surgical consent. It helps to understand what this document is.

The consent is a **broad document**. It covers everything that was discussed with your surgeon at your consultation, everything that is planned for your operation, and additional procedures that *may* become necessary once we are inside and can see your disease directly. Depending on what is found, those additional steps can include:

- Removal of disease from the bowel, and — if needed — repair or removal of a segment of bowel
- Removal of disease from the bladder or the ureters, and repair or temporary stenting if required
- Removal of the appendix
- Treatment of disease on the ovaries, with effort to preserve ovarian tissue wherever possible

- Treatment of disease on the diaphragm or other less common locations
- In rare cases, converting to a larger (open) incision, or giving blood, if it becomes necessary for your safety

This is a general list; your own consent reflects your specific case and goals.

Why the consent is broad — and how it protects you. Endometriosis often hides in places that cannot be fully judged until surgery is underway. A broad consent means that if we find disease that requires an extra step — on the bowel, bladder, or ureter, for example — we can treat it safely in the same operation, rather than stopping and bringing you back for a second surgery. We do not add procedures beyond what your disease requires and what you have agreed to.

Before you sign, make sure you know which steps are planned, which might become necessary, and which choices are yours — for example about your ovaries, your uterus, or a bowel resection. If anything is unclear, ask us; your consent should reflect your wishes. Very occasionally, the safest choice is to stop and plan a second stage rather than do everything at once; if that happens, we will explain why.

Why we may remove the appendix

Patients are sometimes surprised to learn that we may remove the appendix during endometriosis surgery — even when it looks completely normal. We want to explain why, because this is a deliberate, evidence-based part of treating the disease thoroughly.

The appendix sits in the lower right pelvis, exactly where endometriosis tends to settle, and it is involved more often than its reputation suggests — especially in the patients we operate on, who have chronic pelvic pain or deep disease. While appendiceal endometriosis is uncommon in the general population (under 1%), the rate climbs sharply in women who actually have endometriosis, and climbs further with the severity of disease:

- **About 4%** in women with biopsy-proven endometriosis or right-lower-quadrant pain — roughly ten times the rate in the general population.²
- **About 8%** when the appendix is removed routinely during surgery for pelvic pain or endometriosis, across a meta-analysis of more than 6,000 appendectomies.³
- **About 39%** in women with deep infiltrating endometriosis (versus about 12% in superficial disease).¹

Our team has studied this question for a long time. In 1999, Dr. Vidali co-authored one of the early published reports on how often the appendix is involved in severe endometriosis. In 67 women with stage IV (the most advanced stage) disease whose appendix looked suspicious at surgery, the appendix was removed laparoscopically along with all the other visible disease, and no patient had a complication from the appendectomy. Under the microscope, 45% of those appendices contained endometriosis, 10% had a different problem, and 45% were normal — so even a suspicious-looking appendix cannot be judged by eye.³⁶

The most important point is this: **the appendix usually looks normal even when disease is inside it.**

Appendiceal endometriosis frequently lives within the wall of the appendix, beneath a surface that looks healthy to the eye and on imaging. In the studies, the majority of women found to have endometriosis in the appendix had an appendix that appeared normal at surgery.¹ In other words, if only abnormal-looking appendices were removed, the disease would be missed and left behind in many affected women. A scan or a glance is simply not enough to rule it out — the only way to know for certain is to remove the appendix and examine it under the microscope.⁵

This matters because an appendix harboring endometriosis can be a hidden, ongoing source of the right-sided and cyclical pain, nausea, and bloating that endometriosis patients live with — symptoms often misread for years as IBS or “just your period.”⁵ Removing it, in a patient already undergoing surgery and with a fitting clinical picture, addresses a pain generator that would otherwise be left in place.

Removing the appendix during a laparoscopy that is already underway is safe, adds little time, and has not been shown to increase complications in the published series.^{3, 4} For these reasons, we believe that thorough, root-level treatment of endometriosis includes addressing the appendix when the clinical picture warrants it — rather than leaving behind an organ that may carry disease and continue to cause pain. Selective removal and examination of the appendix during endometriosis surgery is, today, widely regarded as part of the standard of care for thorough excision.

In short: the appendix is involved in roughly 8% of endometriosis surgeries overall and up to 39% in deep disease, yet about 76% of those affected have a normal-looking appendix. Because involvement cannot be ruled out by sight or imaging, selective removal in the right patient is now widely considered a standard, evidence-based part of thorough endometriosis surgery — not an incidental extra. Full citations are listed at the back of this handbook.

Your surgery is performed by a team

ESSI is a multi-specialty surgical team, and your operation reflects that. Depending on what your case requires, your team may include general surgery, colorectal surgery, sometimes urology, and several gynecologic surgeons — each a specialist in their part of complex endometriosis.

Endometriosis surgery is rarely a one-person job. For a complex case, three surgeons often work together:

- **one at the console**, operating the surgical instruments (the main surgeon);
- **one assisting at the bedside**;
- **and one assisting from below**, using instruments to position and manipulate tissue so the disease can be reached and removed safely.

Because it is a multi-specialty team, different surgeons take part at different times — and this is completely normal.

For example, a general surgeon may begin the procedure before the main surgeon enters the room; or where two surgeons share a case as co-surgeons, one may start before the other joins. And because the operation has different stages, not every surgeon is in the room for the entire case — each is present mainly for the part that belongs to their specialty.

This is simply how a high-volume, multi-specialty operating room works. It is a sign of the depth of expertise brought to your care: the right specialist, for the right part of your surgery, at the right time. Whoever is in the room at a given moment, your main surgeon is responsible for the operation as a whole.

What the surgery involves

Your surgery is performed under **general anesthesia** — you will be fully asleep, with a breathing machine supporting you throughout. On average, surgery lasts about 1.5 hours, but depending on the complexity of your case it can range from roughly 1 to 6 hours. We usually give your family a more accurate window the morning of surgery, and if the case runs long, a member of the team will step out to update them.

Minimally invasive surgery

Our surgery is minimally invasive — performed through small incisions rather than one large open incision, using a thin camera that lets us see fine detail in places that would be hard to view with the naked eye. Compared with open surgery, the minimally invasive approach means less pain, less bleeding, and a faster recovery.

To create room to work, the abdomen is gently inflated with carbon dioxide gas, which lifts the abdominal wall above the organs. Carbon dioxide is used because the body absorbs it easily and clears it through normal breathing.

We are a fully robotic practice

ESSI is a **100% robotic surgical practice**. Every endometriosis operation we perform is done with robotic assistance, and we have chosen this approach deliberately. We believe robotic surgery gives us the best possible tools to do what matters most in this disease: find and completely remove endometriosis, precisely, while protecting the nerves, organs, and fertility around it.

Here is what the robotic platform offers the surgeon, and why we believe it serves you:

- **Three-dimensional, high-definition, magnified vision.** The surgeon sees the pelvis in true 3D at high magnification — not the flat, two-dimensional image of conventional laparoscopy. In a disease where lesions can be tiny, flat, or hidden, seeing more clearly means finding and removing more disease.⁶
- **Wristed instruments with a full range of motion.** The robotic instruments bend and rotate like a human wrist, with a freedom of movement that straight laparoscopic instruments do not have. This allows finer, more precise dissection in the deep, tight spaces of the pelvis where endometriosis often invades.^{6, 7}

- **Tremor filtration and stability.** The system filters out natural hand tremor and holds the camera perfectly steady, which supports careful, controlled work close to delicate nerves, ureters, bowel, and blood vessels.⁶
- **Better ergonomics for the surgeon.** Operating from a seated console reduces surgeon fatigue during long, complex cases — and a less fatigued surgeon is an asset to a careful, complete operation.^{6 · 7}

These technical advantages are particularly valuable for deep infiltrating endometriosis, which demands meticulous dissection and precise excision — exactly the tasks the robotic platform is built to support.⁷

An honest word on the evidence. Published studies show that robotic surgery is at least as safe and effective as conventional laparoscopy for endometriosis, with comparable complication rates, conversion rates, and blood loss. The pooled evidence also reports that robotic cases take longer in the operating room and, in some analyses, involve a slightly longer hospital stay — and it does not show robotic surgery to be superior on those measures.^{6 · 7} Large trials directly testing whether robotics improves long-term pain and quality of life are still underway. Our commitment to a fully robotic approach reflects both this evidence of safety and our own strong clinical conviction — built on the precision, vision, and control the platform gives us — that it helps us treat this difficult disease as completely as possible.

Your incisions

Because our surgery is robotic, the incisions are small — most are about 5 to 10 millimeters. On average, we make four small incisions:

- One at the belly button
- One to the left of the belly button
- One to the right of the belly button
- One in the left upper abdomen, just below the ribs on the left side

Depending on what your surgery requires, we may add more:

- **A fifth incision** on the right side, near the other right-sided incision, if the surgery is more complex.
- **An additional incision** on occasion, when a case is especially complicated.
- **A slightly larger right-sided incision** — up to about 2 centimeters — if more extensive bowel surgery becomes necessary.
- **Very rarely, a small incision just above the pubic bone** — used only to remove a fibroid that is too large to bring out through one of the smaller incisions.

Through these incisions we pass the camera and the surgical instruments using small ports called trocars. Which incisions you end up with depends on your anatomy and

what we find during surgery — we use the fewest needed to treat your disease thoroughly and safely.

Our special pain protocol for endometriosis surgery

One of the things that sets our endometriosis surgery apart is how we control pain during and around the operation. We use a deliberate, multi-layered protocol — very similar to the approach orthopedic surgeons use for major joint surgery — so that you wake up in far better shape than patients usually expect.

For some patients, a spinal with Duramorph — and an overnight stay. In addition to the general anesthesia that keeps you fully asleep, the anesthesia team may place a spinal injection of long-acting morphine (Duramorph). It gives longer pain coverage and lets us use much less narcotic. Because spinal morphine keeps working for up to a day, it can also slow your breathing many hours after it is given — so everyone who receives it stays overnight in the hospital, where nurses monitor breathing until it has worn off. If you are planned to go home the same day, we use the TAP block and other measures instead. We will tell you before surgery which plan is yours.

A TAP block, placed once you are asleep. As soon as you are under anesthesia — so you feel nothing — we perform a TAP block, which numbs the nerves of your abdominal wall. Because those pain pathways are already quieted before the first incision, most patients wake with much less abdominal pain than they expect.

Low-pressure surgery to reduce shoulder pain. Our surgery requires gently inflating the abdomen with carbon dioxide gas. We use a deliberately low gas pressure — about 10 mmHg rather than the more common 12 — because the pressure is a major cause of the shoulder-tip pain patients feel afterward. Studies show this low-pressure approach meaningfully reduces that shoulder pain, and we do it without compromising your surgery.⁹

A solid recovery program (ERAS) afterward. After surgery we follow a structured enhanced-recovery (ERAS) program and give you whatever pain medication you need to stay comfortable (see your recovery instructions for the full schedule).

If you take pain medication regularly, tell us in advance.

If you have been on pain medication for a long time — especially narcotics — your body may respond differently to pain medicine, and you may need a different plan. Please let us know ahead of time so you can discuss it with us and with our anesthesiologist. That way we can build a pain-control protocol that is right for you, rather than a one-size-fits-all approach.

Right After Surgery

When you wake up, you will be in the recovery room — the Post-Anesthesia Care Unit, or PACU — where a nurse will keep you warm and comfortable and treat any pain or nausea. You will stay here until you are stable and ready to move on, either to a hospital room (the floor) or to the area where you will prepare to go home. While you are waking up, the team will speak with your family member or friend (if you have consented for them to do so) and provide a folder with your detailed discharge instructions.

The team will come to speak with you as you wake, but you will likely still be sleepy from anesthesia. For that reason, the first full update about your surgery is given to the person who came with you, while you rest in recovery — and we encourage them to record it for you. The section below explains how it works.

Your update right after surgery

As soon as your operation is finished, a member of your surgical team comes to speak with the person you have chosen — and given us permission to speak with — and walks them through your surgery using photographs taken during the operation. We strongly encourage you to have this conversation recorded.

Why we ask you to record it

This is the most detailed and personal account of your operation you will receive. It is given minutes after surgery, by someone who was at the operating table, with pictures of what we saw. But it comes at a stressful moment, and people hold on to only part of what they hear in conversations like this: research on medical consultations finds that much of what patients are told is forgotten almost immediately, and that a recording improves both recall and understanding.^{32 · 33} A recording lets you hear the explanation yourself once you are awake, go over it with your family, and share it with your other doctors.

Ask your companion to have a phone charged and ready to record — audio or video — where the hospital allows it. If no one will be with you, or you would rather hear it directly, tell us before surgery and we will plan your update with you.

The recording is yours. It sits alongside your official records — the operative report and the pathology report — rather than replacing them.

Every update follows the same format

So that every patient gets a complete account, whoever gives it, our team follows the same structure every time:

1. **How you are doing right now.**
2. **What we found** — shown on the photographs.
3. **What we did, and why.**
4. **Anything we chose to leave or treat differently,** and why.
5. **Anything unexpected** during the operation.
6. **What was sent to pathology,** and when the results come back.
7. **The plan** for the next hours and days.

Your companion can use this as a checklist — there is a page for it at the back of this handbook, with space for your own questions. If something on it was not covered, they should ask.

Who gives the update

The update is always given by a member of the surgical team who was in your operation. Your operating surgeon makes every effort to come out personally. On days with several operations, though, they may already be scrubbed into the next case, and waiting for that case to finish would leave your family without news for hours. When that happens, another surgeon from your operation gives the update — for example, the general or colorectal surgeon who operated alongside your gynecologic surgeon.

That does not mean they know less about your surgery. They were in the room, they know what was found and what was done, and they give the update in the same format your operating surgeon would.

Write your questions down — and keep asking

Write your questions down before surgery and give them to your companion, so they can be asked during the update. Nobody expects you to think of everything in advance, though. New questions come up once you are awake, and again once your pathology is back. Bring them to your follow-up visit, or contact the clinical team sooner for anything that should not wait. If a question needs your operating surgeon, we will bring them in.

Evening and next-day check-ins

After you are moved to your room, we try to round in the evening to check on you, and that can be another chance to talk. We cannot always promise it — on a busy operating day we may still be scrubbed into other cases late into the night. If we do not see you that evening, one of us will almost always come by the next day to check on you and answer your questions.

Your operative report

You will also receive the formal operative report, the official document of your surgery and part of your permanent medical record. It sets out what was found and what was done — for example, that a ureterolysis (freeing of the ureter) was performed, or that the appendix was removed. We write ours in a structured format, which we explain later in this handbook. The recorded update and the photographs sit alongside that report rather than in place of it.

WHAT WE TELL YOU AFTERWARD IS A SURGICAL IMPRESSION, NOT THE FINAL DIAGNOSIS

What we describe to you right after surgery is what we saw with our own eyes, and what we concluded from it.

A trained surgeon looking directly at the pelvis can recognize endometriosis with considerable accuracy — that is the whole basis of excision. But the eye is not a microscope. Occasionally tissue that looked like disease turns out not to be, and occasionally tissue that looked unremarkable contains disease once it is sectioned and stained. The pathology report is the final diagnosis, and where the two differ, pathology is what counts.

This is true of all surgery, cancer surgery included: the surgeon's assessment in the operating room is always confirmed — or corrected — by the pathologist afterward. That is precisely why we send everything we remove for examination.

The short version:

Right after your surgery, a member of the surgical team who was in your operation walks your companion through what we found and what we did, with photographs, in the same format every time. Please record it, and send your written questions with them. Then keep asking — at your follow-up, and whenever a new question comes up.

There is one more document that completes the picture: your pathology report — the microscope-level record of exactly what was removed. It arrives after this conversation, and it is so important that we have given it its own section later in this guide, “How to Read Your Pathology Report,” where we walk through every part of it.

Before you can go home

- **You will likely wake up with a Foley catheter.** A Foley is a thin, soft tube in your bladder that drains and measures your urine. There is a high likelihood you will have one when you wake, because we like to monitor your urine output closely right after surgery. It is usually removed in the recovery area before you go home.
- **You will need to urinate on your own before discharge.** After the catheter comes out, we will make sure your bladder is working properly before you leave — see “Your bladder after surgery” below for exactly how this works. A brief feeling of discomfort with the first urination after the catheter is removed is normal and temporary.
- **You will need an escort** to take you home. You cannot drive yourself. Plan for an adult to stay with you for the first night, too. If you live alone or are traveling without a companion, tell us before surgery so we can plan with you.
- **If you are having same-day surgery, most patients go home about 2 to 3 hours afterward** once all criteria are met. If you received spinal morphine, you will stay overnight for monitoring (see below).

Your prescriptions will be sent to the hospital pharmacy. Once home, expect to feel tired — rest, review your discharge instructions, and take your medications as directed.

If you stay overnight

Some patients stay the night, and we want to set expectations properly, because patients who were not expecting it often assume something has gone wrong. Usually nothing has.

Some overnight stays are planned in advance; others are decided on the day. The common reasons are simple ones:

- **You received spinal morphine (Duramorph).** This one is planned before surgery. Spinal morphine can slow breathing for up to a day after it is given, so patients who receive it are always monitored overnight.
- **Nausea that has not settled.** Some people are simply more sensitive to anesthesia. If you are still queasy in the afternoon, it is far kinder to keep you where anti-nausea medication can be given through a drip than to send you home to a car journey.
- **Pain not yet controlled on tablets.** Before you go home, your pain has to be manageable on the medication you will actually have at home. If it is not there yet by late afternoon, we keep you until it is.
- **Your operation was more extensive than expected.** If we did bowel or bladder work, or the surgery was long, we may plan an overnight simply to watch you closely. This is a precaution, not a rescue.

Less often, we keep someone because of a complication. If that happens, we will tell you plainly what it is and what we are doing about it — you will not be left guessing.

What an overnight actually looks like

Where the hospital allows, you will usually have a private room, and a family member may be able to stay with you. Nurses will check on you through the night, and you will be encouraged to get up and walk as soon as you are able — that is not them being brisk with you; early walking is genuinely one of the most useful things that happens. In the morning the team reviews how you are doing, and most patients go home before lunch.

Unless your stay is planned — for example because you are receiving spinal morphine — the decision is usually made in the afternoon or evening after surgery, because it depends on how you are actually doing. Which brings us to a small piece of practical advice: pack a small overnight bag even if you expect to go home the same day. Most patients do not need it. The ones who do are very glad they brought it.

Your bladder after surgery

It is common for the bladder to be a little slow to wake up after anesthesia and pelvic surgery, so we check it carefully before you go home. Here is how we make sure your bladder is working.

Checking that you can empty your bladder

Before discharge, we want to see that you can urinate (void) on your own and empty your bladder well:

1. **You void on your own.** We measure how much urine you pass.

2. **We check what is left behind.** Right after you void, we use a quick, painless ultrasound to measure how much urine remains in your bladder (the “residual”).
3. **The goal is a residual under 100 mL.** If less than 100 mL is left behind, your bladder is emptying well. If more than 100 mL remains, we wait and have you void again before re-checking.

If you cannot empty your bladder

Sometimes the bladder is slow to recover — most often simply because of the anesthesia. If you cannot void, or if too much urine keeps staying behind, we will place the Foley catheter back in to rest and protect your bladder. What happens next depends on how quickly your bladder recovers:

- **A few hours or overnight.** Often the catheter stays in for just a few hours or overnight, and we remove it the next morning — by then most bladders are working normally.
- **A couple of days.** If you still cannot void in the morning, we may leave the catheter in for two or three days, and you will go home with it. Some patients are shown how to remove it themselves at home — but only if your discharge instructions say so, and never if you had bladder or ureter repair. Otherwise we remove it for you. See “If you go home with a Foley catheter.”

IF YOU CANNOT URINATE AT HOME

Call us right away — and if you cannot reach us quickly, go to the nearest emergency room.

Occasionally a patient voids well in the hospital with a normal residual, goes home, and then later that day or the next finds she cannot urinate. A bladder that is full and cannot empty needs a catheter placed promptly. Do not wait more than six hours without passing urine — and do not wait at all if your bladder feels painfully full. You will usually keep the catheter for a couple of days until your bladder recovers.

We know that bladder trouble after surgery is unpleasant and worrying. Please be reassured that it is uncommon, and that when it does happen it is almost always temporary — the great majority of patients recover bladder function quickly and completely.

Your Recovery at Home

These are your discharge instructions. Please read them carefully and keep them handy. They cover the warning signs to watch for, your activity and wound care, and how to manage pain, constipation, and other common discomforts. Where your surgery involved something specific — a bowel resection, a hysterectomy, or going home with a catheter — see the additional sections that follow.

Call us immediately for these “alarm” symptoms

If any of the following occur, please call our office right away at **516-584-8710**. Do not use email or text for these concerns.

CALL US RIGHT AWAY

- Fever — see “A note about fever” just below, which explains when a temperature matters
- Severe or worsening pain that is not relieved by your pain medication
- Nausea or vomiting that is prolonged or not relieved by medication
- Foul-smelling or green discharge from your vagina or an incision
- Heavy vaginal bleeding (more than two maxi pads per hour for two hours or more)
- Severe pain or swelling in your calf
- Unable to urinate for six hours — or sooner if your bladder feels painfully full. If you cannot reach us quickly, go to the emergency room.

Call 911 or go to the nearest emergency room — do not wait to reach us — for chest pain, trouble breathing, fainting, heavy bleeding with dizziness, or if you are very hard to wake or confused.

A note about fever — when a temperature actually matters

Fever after surgery worries people more than almost anything else, and most of that worry is unnecessary. A raised temperature in the first day or two after an operation is common and is usually not an infection at all.

The reason is straightforward. Surgery injures tissue, and injured tissue releases inflammatory signals that raise your temperature. This is your body responding normally to having been operated on. Studies consistently find that fever in the first 48 to 72 hours is usually this inflammatory response rather than infection, and that it settles on its own. Infection becomes the more likely explanation when a fever appears later, or when it will not go away.

Because of that, surgeons do not treat a single raised reading as meaningful. The standard definition used in the surgical literature is a temperature above 100.4°F (38°C) on two consecutive days, or above 102.2°F (39°C) on any single day. We use the same standard, so here is what we would like you to do.

WHEN TO CALL US ABOUT A TEMPERATURE

Call us if a temperature over 100.4°F (38°C) persists or comes back across two days — or if any single reading goes above 102.2°F (39°C).

On its own, a single reading of 100.4°F in the first day or two, when you otherwise feel as expected, does not need a call. Drink fluids, get up and walk, and check again in a few hours — and if you are unsure, call us anyway.

Call us sooner than that if the fever comes with something else

The two-day rule applies to a temperature on its own. A fever alongside any of the following is a different matter, and we would like to hear from you the same day:

- Pain that is getting worse rather than better.
- A belly that is swollen, firm, or tender — particularly with no passing of gas.
- Redness spreading around an incision, or pus or foul-smelling discharge.
- Vomiting, or an inability to keep fluids down.
- Burning with urination, or difficulty urinating.
- Shaking chills — the kind where your teeth chatter and you cannot stop.
- A urinary catheter still in place. With a catheter, we want to know about any fever, without waiting.

Two practical points

Your pain medication will mask a fever. Acetaminophen and ibuprofen both lower temperature, and you are taking them around the clock. That means a fever that breaks through your scheduled medication is more significant than the number alone suggests — and it also means a normal reading taken an hour after a dose does not rule out an infection. If you are checking because you feel unwell, note when you last took something.

Use the same thermometer, the same way. Take it orally, not straight after a hot or cold drink, and write down the number and the time. A single figure is much less useful to us than a series — what we want to know is whether it is climbing, holding, or settling.

And the usual caveat applies: if you feel genuinely unwell, or something seems wrong to you in a way that does not fit any of the above, call us anyway. We would far rather take an unnecessary call than miss a necessary one.

Three things nobody warns you about

Before the timeline, three parts of recovery that patients consistently tell us they were unprepared for. None of them is a complication. All of them are normal, and knowing about them in advance takes most of the fear out of them.

Recovery is not a straight line

You will have good days followed by worse ones. This is so reliable that we would be more surprised if it did not happen. A typical pattern: you feel noticeably better around days four or five, do a little more as a result, and then feel worse the next day — and immediately wonder whether you have damaged something.

You almost certainly have not. Doing more is exactly what you should be doing, and feeling it afterward is the ordinary cost of that. What matters is not any single day but the direction over a week or two. If the overall trend is downward, you are on track even if today was worse than yesterday. A steady climb in pain over several days, on the other hand, is worth a call.

The fatigue is real, and it outlasts the pain

Pain gets all the attention before surgery, and then it is the exhaustion that surprises people. Patients describe needing to sit down after a shower, sleeping ten hours and still feeling flattened, or managing an hour of ordinary activity and finding that it has used up the day.

This is normal. Your body is spending a great deal of energy on healing, you have been through anesthesia, and your sleep is usually disturbed for a while. It commonly lasts several weeks and often persists after the pain has largely settled — which is disorienting, because by then you look fine and people assume you are. Protein, fluids, gentle walking and permission to rest are the treatment. Fatigue that is worsening rather than slowly improving should be mentioned to us; fatigue with sudden breathlessness, chest pain or a racing heart needs the emergency room.

Your mood may take longer to recover than your body

Very few handbooks mention this, and we think that is a mistake. It is common to feel low, tearful, anxious, irritable, or oddly flat in the weeks after surgery. Some of it is physiological — anesthesia, disturbed sleep, pain, and a sudden drop in activity all affect mood. Some of it is not.

There is also a particular feeling that comes up often in this disease and almost nowhere else: a kind of anticlimax. You may have waited years to be believed and years more for this operation, and then it is done, and you are at home on the sofa feeling wrung out rather than triumphant. Some patients feel grief for the years lost. Some feel frightened that the pain might come back. Some feel guilty for not feeling happier. All of this is common, and none of it means the surgery was a mistake.

WHEN TO RAISE IT WITH SOMEONE

Low mood that is lifting week by week is part of recovery. Low mood that is deepening is not.

If you are struggling beyond the first few weeks, or you cannot enjoy anything, please tell us or your own doctor. This is not a burden and it is not a failure — it is a part of recovery that deserves care, exactly like your incisions do.

IF YOU ARE THINKING OF HARMING YOURSELF**Get help now — do not wait for an appointment or for a reply from us.**

In the United States, call or text 988 (the Suicide & Crisis Lifeline), call 911, or go to the nearest emergency room. Then let us know, so we can help.

What to expect, week by week

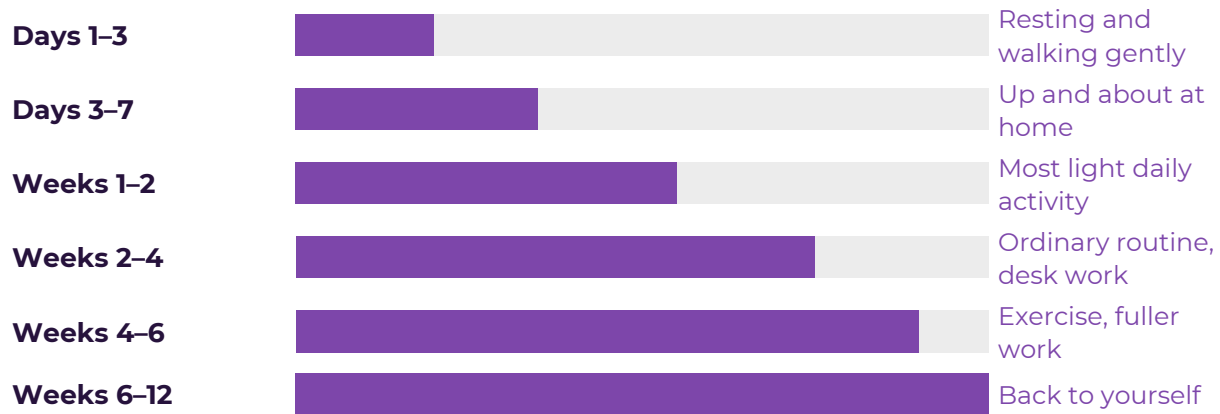
Recovery is a process with a fairly predictable shape, and knowing that shape ahead of time makes the whole thing less worrying. The timeline below brings together what the surgical and physical-therapy literature tells us about how people heal after minimally invasive pelvic surgery. Everyone is different — some move faster, some slower — so treat this as a map of the typical journey, not a set of deadlines you must hit.

When	Where you usually are	What to focus on
Days 1–3	Sleepy, sore, bloated; shoulder or gas pain may appear. Bruising around the incisions is normal.	Rest, but get up and walk gently and often. Stay on your pain and anti-nausea schedule. Begin slow, deep breaths.
Days 3–7	Energy starting to return; gas and shoulder pain easing; first bowel movement usually arrives.	Short, frequent walks, lengthening a little each day. Eat protein and drink well. Shower is fine.
Weeks 1–2	Doing more around the house; incisions closing; most narcotics no longer needed.	Build up daily activity. Driving once off narcotics and the muscle relaxant, and able to brake hard.
Weeks 2–4	Most ordinary daily life resumed; energy noticeably better; desk work often possible.	Begin gentle scar massage once incisions are fully closed and scabs are gone. Add gentle core activation (deep breathing, light abdominal engagement). Ease back toward exercise.
Weeks 4–6	Returning to fuller activity and exercise; physical/strenuous work usually resumes.	Progressive return to jogging, cycling, yoga, and core strengthening, building up rather than jumping in.
Weeks 6–12	Feeling largely yourself; scars fading from pink toward your skin tone.	Full activity. Honest review of any lingering pain or symptoms — flag it rather than enduring it.

Internal tissues continue to strengthen for several months even after you feel well — which is why “feeling fine” and “fully healed” are not quite the same thing, and why easing back gradually matters.

A picture of recovery

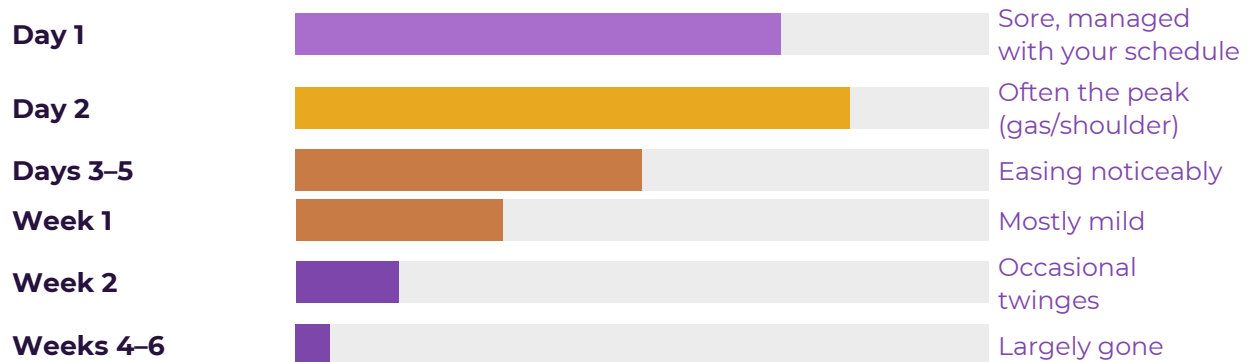
If it helps to see it, here is roughly how much of “normal” most patients have back at each stage. This is an illustration of a typical recovery rather than measured data — your own line may sit higher or lower, and that is fine.



Share of your normal activity, typically recovered. A rough guide, not a target.

How pain usually settles

Pain after this kind of surgery is real but short-lived for most people, and it follows a downward curve. It is often a little worse on the second day — partly as gas pain and shoulder pain peak — and then steadily eases. The bars below show the typical pattern of incision and gas-related pain; if yours is following roughly this shape, things are going as expected.



Typical intensity of surgical pain over time. Pain that is climbing rather than falling after the first few days, or that your medication is not touching, is worth a call — see the alarm symptoms above.

The shape matters more than the day. It is normal for day two to feel like a step backward. What we want to see is the overall trend bending downward over the first week. If instead your pain is steadily increasing, that is the signal to reach out.

Restarting exercise and rebuilding your core

One of the most common questions is how to get back to exercise without setting yourself back. The physical-therapy approach is reassuringly gradual: start gentle and early, then layer in more as your body allows. You do not need to protect your abdomen as if it were fragile — ordinary movements like standing up and gentle walking are part of healing — but you do build back in stages.

- **First (days to ~2 weeks): movement and breathing.** Walking and slow, deep “diaphragmatic” breaths (hand on belly, breathe so the belly rises) gently wake up the deep core and help circulation. This is the foundation everything else is built on.
- **Next (~weeks 2–4): gentle core activation.**¹⁸ Light engagement of the deep abdominal muscles — think of softly drawing the lower belly in on an exhale, without straining or holding your breath — plus easy range-of-motion movement. Small and frequent beats hard and occasional.
- **Then (~weeks 4–6): progressive strengthening and cardio.** Once incisions are healed and you are comfortable, build back toward functional strength and cardio — walking to jogging, cycling, yoga, and swimming once your six weeks are up (eight after a hysterectomy) — increasing gradually. Exhale on effort; avoid bearing down or holding your breath against a tight belly.
- **Throughout: let pain guide you.** A meaningful increase in pain means ease off, rest, and try again later with less intensity. Progress, not speed, is the goal.

Many patients benefit from working with a pelvic-floor or core-focused physical therapist, who can tailor this progression to you and also help with scar tissue. We are happy to point you toward one if you would like.

Pelvic floor physical therapy — who it helps and what to expect

This deserves more than a passing mention, because for a substantial number of our patients it is the difference between a good result and an excellent one. Years of pain teach the pelvic floor to guard. Those muscles stay tight long after the disease that provoked them is gone, and tight pelvic floor muscles produce pain of their own — deep aching, painful sex, urinary urgency, difficulty emptying the bladder or bowel. Removing the endometriosis does not automatically release them.

Who benefits most

- Pain with sex, before surgery or persisting afterward.
- Urinary urgency or frequency, or trouble starting or finishing.
- Pain that is worse with sitting, or a feeling of tightness or spasm low in the pelvis.
- Constipation or difficulty passing a bowel movement that is not explained by medication.
- Pain that is still there some weeks after surgery when everything else has settled.
- Anyone who had pelvic floor or bladder Botox — therapy is how that window gets used.

When to start depends on you. Scar work and gentle exercises usually begin around two to six weeks. Internal work, where it is needed, waits until you are past pelvic rest and cleared. We will tell you what fits your case.

What a first appointment is actually like

Patients often put this off because they do not know what they are agreeing to, so here is the honest version. The first visit is mostly conversation and assessment — your history, how you move, how you breathe, how your abdominal wall and pelvic floor behave. There may be an internal examination, which is done with your consent, can be declined, and can wait until a later visit. Nothing happens that you have not agreed to.

Treatment is not a set of Kegels. For most of our patients the work is the opposite — learning to release and lengthen muscles that have been clenched for years, not to strengthen them further. It typically involves breathing, gentle manual work, stretches and exercises at home, and it takes a course of visits over weeks rather than one session.

FINDING THE RIGHT THERAPIST

Ask for someone who specializes in pelvic health and has worked with endometriosis patients.

This is a specialty within physical therapy, and a general orthopedic therapist is not the same thing. Ask us — we can point you toward someone, including in your own area if you travelled to us for surgery.

Your incisions and scars

Your incisions are small — typically a handful of keyhole openings, one usually hidden in the navel and the others spread across the abdomen (see “Your incisions” in the day-of-surgery chapter for where they usually go). Here is what is normal as they heal, and how to give them the best chance of fading well.

- **We close with stitches and Steri-Strips — never glue.** Many patients are allergic to surgical skin glue (such as Dermabond), so as a matter of practice we do not use it. Your incisions are closed with dissolvable stitches under the skin and small Steri-Strip tapes on top.
- **Bruising, redness, and a little swelling are normal.** It is common for the skin around an incision to look bruised — purple, then yellow-green as it fades — and a bit pink or red in the first couple of weeks. A small firm “ridge” under a healing incision is also normal and settles over the following weeks.
- **Tape can cause redness — especially with sensitive skin or MCAS.** Some people react to the adhesive in tapes and dressings, leaving a square or strip of redness or itch right where the tape sat. This is an irritation, not an infection. If you know you have sensitive skin or mast cell activation syndrome (MCAS), tell us — we can plan around it. A spreading redness with warmth, pus, or fever is different and should be called in (see alarm symptoms above).
- **Showering is fine the day after surgery.** Let water run over the incisions, pat them dry, and do not scrub or soak them. No baths, pools, or hot tubs for 6 weeks.
- **Massage your scars once they are fully closed.** Starting around 2 to 3 weeks — after the incisions are completely closed and any scabs are gone — gently massaging each scar for a couple of minutes, once or twice a day, helps keep the tissue soft and flat and

discourages it from “scarring down” to the layers beneath. A plain, fragrance-free moisturizer or silicone gel works well as you do it.¹⁹

- **Protect them from the sun for a year.** New scars darken permanently if they get sun in the first year. Keep them covered or use a high SPF once healed.

A physical therapist can also help with scar massage and with releasing any tightness that forms around an incision — another reason therapy can be worthwhile.

If you are hoping to conceive

If part of the reason for your surgery is fertility, the most common question is simply: when can we start trying? The encouraging answer from the evidence is — sooner than many people assume.

- **We usually suggest starting to try once your six weeks of pelvic rest are over and we have cleared you** — roughly six to eight weeks after surgery for most patients. For most people there is little benefit in waiting much longer; the data point the other way.
- **The first year is the most fertile window.** Studies of conception after endometriosis surgery consistently show that the highest chance of pregnancy is in the first 6 to 12 months afterward, with many pregnancies happening in the first several months. Removing the disease appears to open a window, and it makes sense to use it.²⁰
- **If you had microwave ablation for adenomyosis, wait at least twelve weeks.** That treatment has its own timeline, and it overrides the general timing above.
- **Your specific plan depends on your situation.** The stage of disease, your age, your ovarian reserve, and any partner factors all matter, and for some patients assisted reproduction (such as IVF) is the right path rather than trying naturally. We will give you guidance tailored to you — this is a general timeline, not individual advice.

Talk to us before you start trying.

At your follow-up we will go over what we found, what it means for your fertility, and the timing that makes the most sense for you. If conceiving is part of your goal, raise it early so we can plan together — and so we do not lose the valuable window that surgery opens.

Activity and exercise

IF YOU REMEMBER ONE THING

Walk early, and build up gradually.

Gentle walking from the day you get home lowers your risk of blood clots, wakes the bowels up, and helps clear the surgical gas. Add a little more each day and let pain be your signal to scale back.

The single most important idea is graduality. You do not have to wait weeks to start moving — in fact, you should not. Gentle activity begins the day you get home and builds up steadily from there. The goal is to add a little more each day, let your body set the pace, and back off when something tells you to. Recovery is not a matter of resting completely and

then suddenly switching back on; it is a gradual ramp, and starting early (gently) is part of healing.

- **Start walking right away.** Begin gentle walking the day you come home and increase your distance a little each day. Early movement is one of the best things you can do — it lowers the risk of blood clots, wakes the bowels up, helps clear surgical gas, and speeds your recovery overall. Climbing stairs is fine.
- **Build up gradually, guided by how you feel.** Over the first couple of weeks, extend your walks and add normal daily activities as your energy returns. Around weeks two to four most people are doing the ordinary business of daily life; light exercise is reasonable from about two weeks, and by four to six weeks you can ease back into fuller, more deliberate exercise such as jogging, cycling, or yoga — building up rather than jumping straight to your previous level. If an activity causes pain, that is your signal to scale back and give it more time.
- **Let comfort be your guide, not a fixed rule.** Rather than holding you to a rigid restriction, we ask you to listen to your body: do what feels reasonable, stop short of what hurts, and progress as you are able. Avoid pushing into genuinely strenuous effort in the very early weeks, but within that, comfort is the best guide you have. If you had bowel, bladder, ureter or hysterectomy surgery, ask us before heavy lifting or strenuous exercise, even if it does not hurt — after an internal repair, comfort alone is not the whole guide.
- **Pelvic rest for 6 weeks:** no sex, tampons, douching, or anything else inserted into the vagina. You must be cleared by your physician before resuming sexual intercourse.
- **Showering and bathing:** you may shower from the day after surgery. No baths, swimming, or hot tubs for 6 weeks.

Driving

Driving is one of the questions we are asked most, so here is exactly how to think about it. Two things have to be true before you get back behind the wheel — and once they are, you are clear to drive.

- **You must be off narcotic (opioid) pain medication and the muscle relaxant (Robaxin).** Both can make you drowsy and slow your reactions, and you should never drive while taking them. The over-the-counter medications in your plan (Tylenol, Motrin) do not affect your ability to drive.
- **You must be able to brake hard in an emergency without pain holding you back.** A simple test: sitting in your parked car, press firmly on the brake pedal as though stopping suddenly. If you can do that without significant pain or hesitation — and turn to check your mirrors and blind spots comfortably — you are ready. If pain makes you flinch or hold back, wait a few more days and test again.

In practice, many patients meet both of these within several days to about two weeks, depending on the surgery and how they feel. It is perfectly fine to go out and run errands sooner — as a passenger, with someone else driving — well before you are ready to drive yourself.

Returning to work

When you go back to work depends mostly on what your work asks of your body, and we want this to be guided by what feels right for you rather than by a rigid timetable.

The table below gives typical ranges by the kind of work you do. Two things to keep in mind as you read it: almost everyone does better returning part-time first, and fatigue is usually what limits you rather than pain — people plan around the pain and are then caught out by the tiredness.

Kind of work	Typical return	What tends to be the limit
Desk or remote work	About 2 weeks, often part-time first	Concentration and fatigue more than pain; screen days are tiring early on
Office work with a commute	2 to 3 weeks	The commute itself — standing on trains, carrying a bag, long drives
Teaching	3 to 4 weeks	A full day on your feet with no real chance to sit or rest
Healthcare, nursing	4 to 6 weeks	Long shifts, lifting and transferring patients, missed breaks
Retail, hospitality, service	4 weeks	Standing all day, lifting, little control over your own pace
Warehouse, trades, physical labor	6 weeks, sometimes longer	Heavy lifting and repeated bending; ease in with lighter duties if you can
Travel-heavy roles	Discuss with us	Flying and long sitting carry their own considerations — see the section on preventing blood clots

These are ranges, not rules, and they are not permissions you need to earn. Everyone heals at their own pace. If you are ready sooner, that is fine; if you need longer, that is equally fine and more common than people expect.

We will provide a return-to-work note — just ask.

Our office can write a note for your employer covering your time away and any restrictions you need. Most of all, we want you to feel genuinely comfortable when you go back. We are not rigid about this — if you need more time, lighter duties, or a phased return, tell us and we will do our best to accommodate whatever works for you and your employer. Just contact the office at **516-584-8710** or **clinical@essidoctors.com** and we will take care of it.

Wound care, day to day

The earlier section on your incisions and scars covers what is normal and how to care for them as they fade. A few practical points for the first couple of weeks:

- If you have a bandage over an incision, you may remove it after 24 hours. A piece of gauze that is stuck can be left to come off in the shower.
- Leave your Steri-Strips alone at first. Once they begin to lift and peel away on their own in the shower, you can remove them.
- Your incisions are closed with dissolvable stitches that disappear in about 2 weeks. If you feel a small plastic-like “tail” from a stitch, that is normal — do not pull on it.
- Gently clean the incisions in the shower; do not rub, scrub, or soak them. Pat dry.

Nutrition and supplements for healing

What you eat in the weeks after surgery genuinely affects how well and how quickly you heal. You do not need anything complicated — the priorities are simple, and we have laid them out in order of what matters most.

Eating

- **Return to your normal diet.** For most surgeries there are no special food restrictions. Start with foods that are easy to digest and build back to your usual eating as your appetite returns.
- **Protein is the priority.** Healing tissue is built from protein, and most people simply do not eat enough of it after surgery — especially when appetite drops. Make protein the centerpiece of each meal (eggs, fish, poultry, meat, dairy, beans, tofu). Food first, with a protein shake to fill the gap on days when eating is hard. Of everything here, reaching your protein is the most useful.
- **Stay well hydrated.** Drink plenty of fluids throughout the day. Good hydration helps your energy, your bowels, and your recovery, and it matters even more if you tend to feel lightheaded when you stand.
- **Favor foods that keep you regular.** Fruits, vegetables, and whole grains help prevent constipation. Avoid foods that tend to constipate you (for many people, that includes rice or bananas) in the first week or two.

Supplements

Keep this simple. A few targeted supplements help healing; most others can wait.

- **Zinc, as a short course,** has a real role in wound healing. A few weeks taken with food is reasonable — it is not meant to be taken indefinitely.
- **Resume your iron only when we tell you.** If you stopped an iron supplement before surgery, ask us when to restart it — iron supports rebuilding your blood count but can worsen constipation, so timing matters.
- **Hold the blood-thinning supplements a little longer.** Fish oil / omega-3, high-dose vitamin E, and turmeric / curcumin can increase bleeding. If you were asked to stop them before surgery, check with us before restarting.

If you take other vitamins or supplements regularly, it is fine to bring them up with us and we will tell you when to resume — but you do not need a long list of new products to heal well. Protein, fluids, and a short course of zinc are the parts that earn their place.

Note: if you had a bowel resection, your diet instructions are different — see that section below.

Your bowels after surgery

It is completely normal for your bowels to be sluggish for a few days after surgery, and getting them moving again is an important part of recovery. Anesthesia, pain medication (especially narcotics), reduced movement, and eating less all slow the gut down for a while. Here is what to expect and how to help things along.

What is normal — standard (non-bowel) surgery

- **Passing gas comes first.** Before a bowel movement returns, you should start passing gas (flatus) — this is a good, reassuring sign that your bowels are waking up.
- **A bowel movement often takes a few days.** Many patients do not have their first bowel movement until two to five days after surgery. This delay is expected and is not a cause for alarm on its own.
- **The first stool is often hard or difficult.** Because the gut has slowed and pain medicine firms the stool, your first movement may be harder than usual. Staying ahead of this with a stool softener and fluids makes it easier.
- **What it should look like.** Aim for soft, formed stool that passes without significant straining. Hard, pellet-like stool means you need more fluids and stool softener; very loose or watery stool for more than a day or two is worth telling us about.

Helping your bowels move

- **Walk.** Gentle, frequent walking is one of the most effective ways to restart the bowels — begin as soon as you are able.
- **Stay hydrated and eat gently.** Drink plenty of water and favor foods that are easy to digest. Avoid foods that constipate you (for many people, rice or bananas).
- **Use your stool softener.** Take Colace (docusate) 100 mg once or twice a day to keep stool soft, especially while you are taking pain medication.
- **Ease off narcotics when you can.** Opioid pain medicine is a major cause of constipation — leaning on the non-opioid medications in your pain plan helps your bowels recover faster.

If you have not had a bowel movement by two days

Some constipation is expected after surgery — it can be normal not to have a full bowel movement for up to a week. What reassures us is that you are still passing gas and able to tolerate both liquids and solid food without nausea or vomiting. As long as that is the case, a slow return of bowel movements is not dangerous.

If you had bowel surgery — a repair or a resection — stop here and read “If you had a bowel resection or bowel surgery” below instead — do not start any laxative without calling us first.

That said, we would rather hear from you sooner than later. If two days pass without a bowel movement, please reach out to us — and you may take a dose of milk of magnesia (an over-the-counter laxative) to help things along. A simple, effective routine to prevent and treat constipation is:

- **Colace (docusate) 100 mg, twice a day** — to keep stool soft while you are on pain medication.
- **Miralax (polyethylene glycol) 17 g (one capful or packet), once a day** — increase to twice a day if you have not had a bowel movement by 3 days.
- **Milk of magnesia or magnesium citrate** — you may add this at any time for the discomfort of needing to move your bowels. A Dulcolax suppository, or another over-the-counter laxative that has worked for you before, is also fine.

CALL US RIGHT AWAY

Constipation on its own is usually fine. These added signs are not: no passing of gas; a swollen, firm, or painful belly; fever; or nausea and vomiting with an inability to eat. Together they can mean the bowel has not restarted properly, and they need to be checked promptly.

Do not take milk of magnesia or magnesium citrate if you have kidney problems. If your stools become loose or watery, stop the laxatives.

If you had a bowel resection or bowel surgery

If part of your bowel was repaired or a segment was removed, your recovery is different — and your bowel habits will be different for a while. This is expected.

- **Follow a low-fiber (“low-residue”) diet** for several weeks.¹² Choose soft, easy-to-digest foods, and avoid those the gut breaks down poorly — raw vegetables, foods high in insoluble fiber (such as kale), seeds, nuts, corn, and large amounts of whole grains. Eat smaller meals more often.
- **Reintroduce foods slowly.** Once your surgeon approves, add one new food at a time so you can see how your body responds before adding the next.
- **Expect looser, more frequent stools.** Because the bowel is shorter and still healing, stool often arrives looser, more frequent, and more urgent at first. This is normal and usually settles as your body adapts.
- **It can take months to fully settle.** Bowel habits commonly keep changing and gradually normalizing over the first 3 to 6 months. Yogurt and adequate fluids can help; ask us before adding any fiber supplement or anti-diarrhea medication.
- **Stay hydrated.** Looser, more frequent stools can dehydrate you — drink plenty of fluids, and tell us if diarrhea is persistent.

Your pain medications do not change. Follow the same schedule as everyone else, including the ibuprofen — it remains part of your plan after a bowel resection.

After bowel surgery, do not take any laxative without checking with us first.

Vaginal bleeding

Light vaginal bleeding can be expected for up to 6 weeks and may increase with activity — it should stay lighter than a period. Call the office if you are soaking more than two maxi pads per hour for two hours or more. Some patients have spotting that stops and then returns; this is normal. Your period may arrive on time or later than usual, and may be heavier than usual for one or two cycles after surgery. Use pads, not tampons, during your six weeks of pelvic rest. If heavy bleeding comes with dizziness, fainting, a racing heart or shortness of breath, call 911 or go to the nearest emergency room.

Pain management

Some pain after surgery is expected. The goal is comfort — enough relief to let you eat, get out of bed, walk, visit with family and friends, and rest. Rather than relying on narcotics, we use several medicines together, each one targeting a different part of the pain. Opioids are reserved for severe breakthrough pain only.

HOW OUR PAIN PLAN WORKS

Take the Tylenol and Motrin on schedule, not only when it hurts.

Alternating them around the clock is what keeps pain from building. Opioids are held in reserve for severe breakthrough pain, and most patients need very few of them.

Your medications and how to take them

Medication	Dose	When
Acetaminophen (Tylenol)	1,000 mg	Alternated with Motrin, around the clock
Ibuprofen (Motrin)	600 mg	Alternated with Tylenol, around the clock
Methocarbamol (Robaxin)	500 mg	Every 6 hours, for muscle spasm
Suzetrigine (Journavx)	100 mg first dose, then 50 mg	Every 12 hours, for additional pain
Oxycodone	5–10 mg (one or two tablets)	Every 4–6 hours as needed, breakthrough pain only
Ondansetron (Zofran)	4 mg	Every 8 hours as needed, for nausea

Tylenol and Motrin are your foundation — alternate them continuously. Stagger them so you are taking one or the other roughly every 3 hours, around the clock. By keeping this steady, alternating rhythm rather than waiting for pain to build, most patients stay comfortable without needing narcotics.

An example day:

- 6:00 am — Tylenol 1,000 mg
- 9:00 am — Motrin 600 mg
- 12:00 pm — Tylenol 1,000 mg
- 3:00 pm — Motrin 600 mg
- 6:00 pm — Tylenol 1,000 mg
- 9:00 pm — Motrin 600 mg
- 12:00 am — Tylenol 1,000 mg
- 3:00 am — Motrin 600 mg

This gives you Tylenol every 6 hours and Motrin every 6 hours, offset by 3 hours so something is always working. Take them with food where you can. Keep to the schedule, including overnight, while your pain needs it — usually the first few days. As pain eases, you can lengthen the gaps and let the night doses go so you can sleep; ask us if you are unsure. If you miss a dose, take it when you remember and carry on from there — never take two doses of the same medicine together to catch up. If you are vomiting and cannot keep your medicines down, call us.

Layering in the others:

Robaxin (methocarbamol) — take 500 mg every 6 hours for muscle spasm. It can make you drowsy.

Journavx (suzetrigine) — use for additional pain on top of the Tylenol and Motrin backbone. Take the first 100 mg dose on an empty stomach (at least 1 hour before or 2 hours after food), then 50 mg every 12 hours, with or without food. Avoid grapefruit while you take it. It can make some hormonal birth control less effective (methods containing a progestin other than levonorgestrel or norethindrone), so use condoms or another non-hormonal method while taking it and for 28 days after.

Oxycodone — reserve for severe breakthrough pain only. Take 5 mg (one tablet), or 10 mg (two tablets) if needed. Oxycodone and Robaxin both cause drowsiness, and together the effect is stronger: do not take them with alcohol, sleeping pills or other sedating medicines. If you are very hard to wake, confused, or breathing slowly or shallowly, the person with you should call 911.

Zofran (ondansetron) — take for nausea. You can take it alongside your pain medication to head nausea off before it starts.

DAILY LIMITS — DO NOT EXCEED

Acetaminophen (Tylenol): 4,000 mg in 24 hours. Ibuprofen (Motrin): 2,400 mg in 24 hours.

The schedule above already brings you to those limits, so do not add extra doses. Check the label on anything else you take — many cold, flu, sinus, and night-time sleep products contain acetaminophen without saying “Tylenol” on the front, and taking one alongside your schedule can push you over. If you are unsure, call us before taking it.

Running low on a prescription? Ask the clinical team for a refill during office hours, a day or two before you run out — refills are much harder to arrange over a weekend.

Shoulder pain

One of the most common surprises after this kind of surgery is pain in the shoulder or the tip of the shoulder — even though nothing was done to your shoulder. This is normal, expected, and temporary.

Why it happens. To perform your surgery we gently inflate the abdomen with carbon dioxide gas. Gas rises, so any gas remaining afterward tends to collect high in the abdomen, against the underside of the diaphragm — the muscle beneath your lungs. There it irritates a nerve called the phrenic nerve. Because that nerve shares pathways with the nerves of the shoulder, your brain feels the irritation as shoulder or neck pain. This is called *referred pain*: the source is your diaphragm, but it is felt in your shoulder.⁸

What to expect. Shoulder pain often starts the day after surgery rather than the same day, tends to peak around the second day, and usually eases within three to four days as the gas is absorbed — resolving completely within about a week. It can feel sharp and may be worse when you breathe deeply. Because we use a low-pressure technique during surgery, our patients tend to have less of it.⁹

What helps:

- **Walk and move.** Gentle, frequent movement helps your body absorb and clear the gas faster — the more you are up and about, the sooner it eases.⁸
- **Apply warmth, and breathe.** A warm shower or a heating pad, light massage, and slow deep breaths can all bring relief.
- **Use your regular pain medications** — the alternating Tylenol and Motrin already in your plan help with this pain too.⁸

Call us if shoulder pain is severe, lasts longer than about a week, or comes with fever. Shoulder pain with shortness of breath or chest pain is different: call 911 or go to the emergency room.

Gas pain and bloating

Separate from shoulder pain, you may feel gas pain — bloating, tightness, or a stabbing pain that moves around the abdomen. This is a different thing from referred shoulder pain, though both come from the same carbon dioxide used during surgery.

Why it happens. Not all of the carbon dioxide is released at the end of surgery; some stays trapped in the abdominal cavity and stretches it, which is felt as bloating and distension.¹⁰ Your body steadily absorbs this gas — carbon dioxide is used precisely because the body reabsorbs it quickly and clears it through your breathing.¹⁰ Until then, it can be uncomfortable.

But the gas is only part of it — and this is the part that surprises people. Swelling after this surgery often gets worse before it gets better. Three things are happening at once: the gas, the inflammation that surgery itself causes in the tissues we worked on, and a bowel that has slowed down and is holding onto gas of its own. The inflammation peaks over the first days to weeks rather than resolving in hours. Many patients look and feel more swollen at the end of week one or two than they did on day two, and conclude that something has gone wrong. Usually it has not — though a belly that is getting firmer and more painful, especially with no gas passing, vomiting or fever, needs a call (see the alarm symptoms). It is a normal part of the arc, it settles gradually over the following weeks, and loose clothing and patience are most of the treatment.

Position matters. When you lie flat, trapped gas is less able to move and work its way out. When you stand up and walk, the gas is far more likely to shift, move along, and be expelled or absorbed. This is why getting up and moving is the single best thing you can do for gas pain — staying still and lying flat tends to prolong it.

What helps:

- **Get up and walk.** The most effective remedy — movement helps the gas move and clear, and stimulates your bowels at the same time.
- **Change positions.** Sitting up, gently rocking, or shifting position helps the gas find its way out rather than staying pooled while you lie still.
- **Try simethicone (Gas-X).** It works on gas inside the bowel rather than the surgical gas around it, and for some people it helps a good deal. Take two 80 mg tablets or one 125 mg tablet, up to three times a day.
- **Stay ahead of constipation.** Constipation magnifies gas pain, so keeping your bowels moving (see “Your bowels after surgery”) genuinely helps.

Nausea and vomiting

Nausea can be a side effect of narcotic pain medicine. If it affects you, take the ondansetron (Zofran) sent to your pharmacy — you can take it at the same time as your pain medication to prevent nausea. Call us if you have severe nausea or vomiting that medication does not relieve.

For Your Partner, Family, or Whoever Is Looking After You

This page is written for them rather than for you. If someone is helping you through the first weeks, hand them the handbook open at this page — people want to help and often have no idea what actually helps.

What genuinely helps in the first week

- **Take over the medication schedule.** This is the single most useful thing. The pain plan works by alternating Tylenol and Motrin around the clock, including overnight, and someone recovering from anesthesia will lose track. Set the alarms, keep a written list of what was taken and when, and wake her for the night doses while her pain still needs them — usually the first few nights.
- **Walk with her.** Short, frequent walks are one of the few things that measurably speed recovery and lower the risk of blood clots. She is far more likely to do it with company than on her own.
- **Handle the food and the fluids.** Protein and hydration do real work in healing, and appetite is usually poor. Small amounts often, brought to her, beats waiting to be asked.
- **Do the invisible jobs.** Pharmacy runs, laundry, childcare, school pickups, feeding the pets, answering the messages from people asking how she is. None of it looks like caregiving and all of it is.
- **Put things within reach before you leave the room.** Getting up and down is the sore part. Water, phone, charger, medication, a snack — keep the reachable radius stocked.

What to watch for

You do not need to be a nurse. You do need to know the handful of things that mean picking up the phone. Call our office at 516-584-8710 for:

- A temperature over 100.4°F (38°C) that persists or returns across two days, or any reading above 102.2°F (39°C) — or a fever together with worsening pain, a swollen belly, vomiting, or redness around an incision.
- Pain that is climbing over several days rather than easing, or that her medication is not touching.
- Vomiting that will not stop, or an inability to keep fluids down.
- A belly that is getting more swollen, firm, or painful — particularly with no passing of gas.
- Redness spreading from an incision, or pus.
- Pain or swelling in one calf.
- Soaking more than two maxi pads an hour for two hours or more — or any heavy bleeding with dizziness or fainting, which means 911.
- Unable to urinate for six hours, or sooner if the bladder is painfully full.
- Sudden breathlessness or chest pain — call 911 or go to the emergency room, immediately.
- Very hard to wake, confused, or breathing slowly or shallowly — call 911.

- Any talk of harming herself — help her get care now: call or text 988, or call 911.

Trust your instinct. You know her better than we do, and if she seems wrong to you in a way you cannot name, that is worth a phone call. We would far rather hear from you unnecessarily.

What is harder to see

Two things catch families out, and both are in this handbook in more detail.

The first is the fatigue. It outlasts the pain by weeks, and it arrives at exactly the point when she looks fine again and everyone assumes she is better. Looking well and being recovered are not the same thing.

The second is mood. Low spirits, tearfulness, anxiety, or a flat sort of anticlimax are common after this surgery — particularly for someone who waited years to be believed and then finds herself on the sofa feeling wrung out rather than triumphant. It does not mean the surgery went badly. Mostly it needs company and patience — but if her mood is getting worse rather than better, help her talk to us or her own doctor.

THE MOST USEFUL THING YOU CAN DO

Believe her, and do not measure her against the calendar.

Most people with this disease have spent years being told their pain was exaggerated. Recovery is not linear — a worse day after a better one is normal and not a sign she has overdone it or is making too much of it. Take the bad days at face value and let the trend over weeks tell the story.

Opioid safety and disposal

Opioids can be safe and effective, but carry a risk of side effects, tolerance, and dependence that grows the longer they are taken. To reduce your risk:

- Store opioids safely, out of reach of others, including family and children.
- Use them only as directed by your doctor; never share, sell, or use someone else's.
- To reduce your dose, lengthen the time between doses or take a smaller amount each time.
- **Dispose of leftover opioids** once your recovery is complete. A drug take-back drop box is best — many pharmacies have one, and you can find others through the DEA website. If no take-back option is available, the FDA advises flushing leftover oxycodone down the toilet, because opioids left in the home are a real danger to others; your pharmacist can advise you. Scratch out the personal information on the empty bottle before discarding it.
- **Ask us whether you should keep naloxone (Narcan) at home**, especially if you have taken opioids before or live with children. It is available at pharmacies without a prescription.

Understanding Your Operative Report

The operative report is the official written record of your surgery and a permanent part of your medical record. Patients often ask us about it, so this chapter explains how ours is written, what it contains, and where to find the parts of your story that a formal clinical document is not designed to carry.

How we document your operation

Your operative report is written in a structured format, following the same approach that cancer surgery has adopted as its standard.

The oncology standard. The American College of Surgeons Commission on Cancer has established accreditation standards requiring that key elements of many cancer operations be documented in a synoptic format — a structured checklist of pre-specified data points — rather than as a narrative in prose.²² The studies behind that shift found that structured operative reports capture meaningfully more of the essential information, and do so more consistently.²¹ We apply the same discipline to endometriosis surgery, because the operations are comparably complex and the details matter just as much to the people who read the record afterward.

Why this matters to you.

A structured operative report is the format the evidence supports, and it means the specifics of your case — what was found, where, and what was done about it — are recorded completely and consistently rather than left to vary with however the report happened to be written that day.

Where to find the detail about your own case

Patients who reach us have often waited years to be believed, and that history creates a real hunger for detail. We would rather point you to where that detail actually is than leave you searching for it.

The update right after surgery is the most personal account. It is given minutes after your operation by a member of the surgical team who was there, in the same structured format every time, and it is recorded for you with the photographs taken during surgery. It covers what we found, what we did, and what it means for you, in ordinary language rather than operative terminology. Keep that recording — it is yours, and most patients return to it more than once.

Your pathology report confirms it. What was removed is examined under the microscope, and that report is the independent confirmation of what the surgery found. We have given it its own section in this handbook.

Ask us. If you have read your operative report and something in it is unclear, seems different from what you remember being told, or you want to understand a particular step, bring it to your follow-up or write to the clinical team. We would far rather go through it with you than have you puzzling over terminology on your own. And if anything unexpected happened

during your surgery, we will have told you directly — that is not something you should have to discover by reading. To request copies of your reports, contact the front desk.

Three records, one operation.

The operative report, the update after surgery with its photographs — and your recording of it — and the pathology report. Together they give you a more complete picture of your surgery than most patients ever receive.

What your operation involves, step by step

With all of that said, it is genuinely interesting to understand the shape of the operation — so here we walk through the procedures that may appear on your operative report and consent. Throughout, one principle holds: we look for endometriosis everywhere in the abdomen and pelvis, and we remove all of it, to the very best of our ability. Not every step below applies to every patient; your report reflects what your particular case required.

The first look: cystoscopy and protecting the ureters

After your nerve blocks are placed and you are under anesthesia, the operation usually begins — for most patients — with a cystoscopy: passing a small camera into the bladder to look inside. We do this to check for any endometriosis involving the bladder and for changes such as inflammation or signs of interstitial cystitis.

Protecting the ureters with stents and green dye. During the same step, we place thin tubes called stents up into the ureters — the tubes that carry urine from each kidney to the bladder — and we inject ICG (indocyanine green), a green fluorescent dye. Under the special imaging we use, the dye makes the ureters glow, so they are clearly visible throughout the operation. Because the ureters run right through the areas where endometriosis commonly hides, being able to see them at all times lets us work around them safely and protect them while we remove disease.

Looking inside the uterus: hysteroscopy and biopsy

In many cases we also perform a hysteroscopy — passing a small camera through the cervix to look directly inside the uterine cavity — to check for polyps, fibroids, scarring, or other changes. While we are there, we usually take a small biopsy of the uterine lining.

Why we biopsy. One key purpose is to check for chronic endometritis — a low-grade, often silent inflammation of the uterine lining that is linked to difficulty conceiving and early pregnancy loss, and that is treatable once found. The biopsy is examined with a special stain (CD138) that detects it. We explain this finding in detail in the pathology section.

Removing diseased lining tissue: peritonectomy

What the peritoneum is. The peritoneum is the thin, smooth membrane that lines the inside of the abdomen and pelvis and drapes over the organs — think of it as the delicate wallpaper of the pelvic cavity. It is one of the most common places endometriosis takes hold.

What a peritonectomy is. A peritonectomy is the removal of an area of this lining — we excise (cut out) the affected sheet of peritoneum entirely, rather than burning its surface.

Why we do it in endometriosis. Endometriosis on the peritoneum frequently extends deeper than the eye can see, and microscopic disease can sit in tissue that looks normal nearby. By removing the full thickness of the affected peritoneum — and a margin around it — we take out disease at its root rather than scorching the top and leaving the deeper part behind. This is the surface-level expression of our excision-first philosophy, and it is why your pathology report may list several separate pieces of peritoneum from different areas (pelvic sidewall, ovarian fossa, and so on). The peritoneum regenerates after it is removed.

Freeing the ureters: ureterolysis

What the ureters are. The ureters are the two tubes that carry urine from each kidney down to the bladder. They run along the pelvic sidewalls — directly through territory where endometriosis loves to grow.

What ureterolysis is. Ureterolysis is the careful surgical freeing of a ureter from the tissue around it — dissecting it cleanly away so it is mobilized and protected.

Why it is necessary in endometriosis. Endometriosis and the inflammation it causes can create dense fibrosis (scar tissue) that surrounds, tethers, or even pulls on a ureter. Left alone, this can distort the ureter or, over time, tighten around it and obstruct the flow of urine — putting the kidney at risk. Freeing the ureter does two things: it lets us safely remove the disease and fibrosis packed around it, and it relieves any tension or compression on the ureter itself. In our patients, who often have significant scarring from the disease (or from prior surgery), this step is frequently essential rather than optional — and the ICG dye in the ureters makes it far safer to perform.

Protecting the pelvic nerves: neurolysis

What the nerves are. The pelvis carries major nerves that control and sense the pelvic organs. The most relevant here are the hypogastric nerves — large nerves running one on each side of the pelvis — which carry signals to and from the bladder, bowel, and other pelvic structures, and play a role in their function and in pain.

What neurolysis is. Neurolysis is the careful freeing of a nerve from the disease, scar tissue, or inflammation that has grown around and is compressing it — releasing the nerve so it is no longer entrapped.

Why it matters. When endometriosis or its fibrosis wraps around a nerve like the hypogastric, it can compress and irritate it — a source of pain and of bladder or bowel symptoms. Removing that disease and releasing the nerve can relieve the entrapment while preserving the nerve's function. The aim throughout is nerve-sparing: treat the disease, protect the nerve. Less commonly, endometriosis affects other nerves — for example the sciatic nerve, which runs to the leg — and the same principle of careful release applies, though this is much rarer.

Beyond endometriosis: the pelvic nerves themselves (neuropelveology)

Some pelvic and leg pain comes not from endometriosis but from the nerves of the pelvis themselves: pain that runs down the leg like sciatica, pain in the buttock or perineum, or bladder and bowel symptoms that no scan explains. The discipline that studies these problems is called neuropelveology, and we follow its approach — a careful neurological

history and examination to work out which nerve is involved, where, and why, before deciding on any treatment.³⁹ Two of the problems it uncovers are treated surgically:

- **Pelvic nerve tumors, such as schwannomas.** A schwannoma is a slow-growing, almost always benign tumor of the sheath that wraps a nerve. In the pelvis it can press on the sciatic, sacral or obturator nerves, and it is easily mistaken for an ovarian cyst. We remove these robotically, separating the tumor from the nerve it grows on so that as much nerve function as possible is preserved. Because the tumor grows from the nerve itself, some temporary weakness or numbness can follow, and we go through that risk with you beforehand.⁴¹
- **Blood vessels pressing on a nerve.** Enlarged or abnormal pelvic vessels can press on the sciatic nerve or the sacral nerve roots, causing sciatica, buttock or perineal pain and urinary symptoms — sometimes worse around a period. Freeing the nerve from the vessel, and tying off the offending vein where that is appropriate, can relieve the compression.⁴⁰ (See also “Treating the veins” below.)

These problems are specialized and not common. We mention them because patients whose pain nobody has explained — often after years of normal scans — sometimes have exactly this, and because looking for it is part of treating the whole map rather than only the lesions.

Treating the ovary: cystectomy, and when more is needed

What an ovarian cystectomy is. When endometriosis forms a cyst on the ovary (an endometrioma), an ovarian cystectomy removes the cyst while leaving the ovary itself in place.

Our fertility-preserving philosophy. We work hard to preserve every bit of healthy ovarian tissue we can, because the ovary holds a woman’s finite reserve of eggs. As we describe elsewhere in this guide, the way disease is removed from the ovary has real consequences for ovarian reserve, and our approach is chosen deliberately to protect your fertility. Because endometriomas are fused into the ovary, a small amount of ovarian tissue occasionally comes away with the cyst — which is why your pathology report might note “endometrioma with ovarian tissue” — but minimizing that is a constant priority.

When a tube, or rarely an ovary, is removed. Occasionally a fallopian tube is removed (a salpingectomy) — always with your prior permission. The most common reason is a hydrosalpinx: a fallopian tube that has become blocked and swollen with fluid. A hydrosalpinx will not help you conceive, and the fluid it leaks can actually reduce the success of fertility treatment — so removing it can benefit you. Removing an ovary as well (a salpingo-oophorectomy) is much rarer and needs its own reason, which we will have discussed with you.

An alternative: neosalpingostomy. In some cases, rather than removing a damaged tube, we can open and reconstruct it — a neosalpingostomy — to try to restore function. Whether this is the right choice depends entirely on your fertility goals, so it is something we discuss with you beforehand rather than decide in the moment.

Decisions about your tubes and ovaries are made with you, not for you.

We almost never remove ovaries, and we approach the tubes conservatively. Where there is a real choice — such as removing a hydrosalpinx versus attempting to repair it — we talk it through with you in advance, guided by what matters most to you and your fertility plans.

Disease on the bowel: shaving, disc excision, and resection

Endometriosis commonly involves the colon and rectum, and how we treat it depends on how deeply the disease has invaded the bowel wall. There are three approaches, from least to most extensive, and we always choose the least invasive one that fully removes the disease.

- **Removing an individual lesion / shaving.** For disease on the surface of the bowel, we shave it off the outer wall — peeling the lesion away while leaving the bowel itself intact. This is the most conservative approach and is used when the disease has not penetrated deeply.
- **Disc excision (discectomy).** When a nodule has invaded more deeply but is still relatively contained, we remove a small full-thickness “disc” of bowel wall around it — like coring out the affected spot — and close the opening. This takes the deeper disease without sacrificing a length of bowel.
- **Segmental bowel resection.** When the disease is large, deeply invasive, or involves a long segment, we remove that entire segment of bowel and rejoin the two healthy ends (an anastomosis). This is the most extensive option and is reserved for when the disease genuinely requires it.

We protect the repair. Even when we perform the more conservative shaving or disc excision, we reinforce and repair the area afterward to protect it while it heals. Depending on what was done, additional measures — described in your recovery instructions — may be used to safeguard the bowel during healing. If a segment was resected, see “If you had a bowel resection” for your specific recovery guidance.

A rare but real possibility: temporary ileostomy or colostomy

We want to talk about this honestly, because it matters and because honesty is part of how we earn your trust. When surgery involves the bowel, there is a small possibility that we will need to create a temporary ileostomy or colostomy. We do this in only about 3 to 4% of our cases — it is uncommon — but it is real, and we would rather you understand it now than be surprised by it.

What it is. An ileostomy or colostomy temporarily reroutes the bowel to a small opening on the abdomen (called a stoma), so that stool empties into a pouch worn on the belly rather than passing through the healing section of bowel. An ileostomy uses the small intestine (the ileum); a colostomy uses the colon. The purpose is the same: to divert stool away from a fresh bowel repair so that repair can heal undisturbed.

Why we would do it — the indication is clear. We do not do this casually. The reason is always to prevent a serious complication. When a bowel repair or rejoining (anastomosis) is at higher risk, diverting stool away from it while it heals substantially reduces the chance of a

leak — and the consequences of a leak are far more serious than living with a stoma for a few weeks. It is typically created during the operation itself, when we judge the repair needs that protection; occasionally it is needed in the days right after surgery if a small bowel leak develops. In that situation, it is the safe and correct thing to do.

The honest reality of bowel surgery. This is an unpleasant possibility, and we will not pretend otherwise. But it is, in many ways, an unavoidable reality of operating on the bowel — the same reality that patients undergoing colorectal surgery accept. What we do for deep endometriosis is not simple gynecological surgery; when the disease invades the bowel, we treat it the way a bowel operation must be treated, with the same safeguards. That is precisely why our results are what they are.

It is usually reversed after 8 to 10 weeks. In our practice it is planned as a short-term measure.¹¹ Once the bowel has healed, the stoma is closed in a second, smaller operation (a “reversal”) that reconnects the bowel and restores normal bowel movements through the usual route. Healing or complications can change that timing, and we will tell you when your reversal is planned and what it depends on. Over the weeks after reversal, bowel habits gradually settle back toward normal.

What life is like in the meantime. If you do need a temporary stoma, you are not left to figure it out alone. A specialized ostomy nurse (a wound, ostomy, and continence nurse) teaches you how to empty and change the pouch, which is typically changed every few days. Modern pouches are discreet and worn under clothing, and people live full, normal lives with a stoma — working, traveling, exercising. It affects only your bowels, not your bladder, and it has no effect on your lifespan. We and your care team support you through the entire interval until reversal. You will also get advice on supplies, on drinking enough (an ileostomy in particular can dehydrate you), and on the questions about body image and intimacy that people often feel awkward asking — please ask them.

The honest bottom line.

A temporary ileostomy or colostomy is uncommon in our hands — about 3 to 4% of cases. When we create one during the operation, it is a precaution that protects a bowel repair while it heals. If one is ever needed afterward, it is because of a leak, and we will explain exactly what happened. Either way, it is planned to be temporary and is usually reversed.

Removing the appendix: appendectomy

The appendix is frequently involved in endometriosis, so it is examined and, when indicated, removed. We explain the full reasoning — and the evidence behind it — in the earlier section “Why we may remove the appendix.” On your pathology report it will be confirmed as containing disease or, if clear, noted as a normal appendix.

Releasing scar tissue: adhesiolysis (and how we prevent new adhesions)

What adhesions are. Adhesions are bands of internal scar tissue that form between organs and surfaces that should glide freely — caused by endometriosis, inflammation, or prior surgery. They can bind organs together, distort anatomy, and cause pain.

What adhesiolysis is. Adhesiolysis is the careful surgical release of these adhesions — separating the stuck surfaces and restoring normal anatomy. It appears on operative reports in various forms depending on what was freed.

How we prevent new adhesions from forming. Because surgery itself can trigger new scar tissue, we take a deliberate step to prevent it: we place a highly refined human placental (amniotic) membrane graft over the treated areas. This barrier helps surfaces heal without sticking together, and in our experience it works extremely well at reducing the formation of new adhesions — protecting the result of the surgery itself.

Disease on the bladder: from the dome to the bladder wall

Superficial bladder disease (bladder dome). When endometriosis sits on the surface at the top of the bladder, we excise it from the bladder dome — removing the disease while leaving the bladder otherwise intact.

Full-thickness excision and repair. When a nodule has grown deeper, into the wall of the bladder, we remove that full-thickness portion of bladder and then carefully repair it — your pathology may note bladder mucosa (the inner lining) within the specimen. The bladder heals reliably after this repair, usually with a catheter in place for a short period to let it rest.

When the ureter is deeply involved: reattachment or reimplantation

Occasionally we find that the ureter — the tube from the kidney to the bladder — is so heavily involved by disease that simply freeing it (ureterolysis) is not enough. In that situation, after removing the affected portion, we restore the urinary pathway in one of two ways:

- **Reconnecting the ureter (ureteroureterostomy).** The two healthy ends of the ureter are carefully sewn back together.
- **Reimplanting the ureter into the bladder (with a Boari flap if needed).** When the involved segment is near the bladder, the healthy ureter is re-attached directly into the bladder. If extra length is needed to bridge the gap, a flap of bladder tissue — a Boari flap — is fashioned to reach it.

This is usually anticipated and discussed in advance, because imaging often suggests when the ureter is significantly involved. Occasionally, though, the full extent is only clear once we are operating — which is part of why your consent covers ureteral repair.

Treating the veins: gonadal vein ligation and vascular compression

Sometimes the source of nerve compression is not disease at all but a blood vessel. Enlarged veins — in particular the gonadal (ovarian) veins — can press on the nerves running into the pelvis or down toward the leg, contributing to pain. When we find this, we tie off (ligate) the offending vessels, relieving the pressure on the nerve. This is the same nerve-sparing goal as neurolysis, achieved by addressing a vascular cause.

Ligating the gonadal veins for pelvic congestion. We also ligate these veins for a second reason. Where we have established that you have significant pelvic congestion — enlarged, incompetent ovarian veins pooling blood in the pelvis — tying them off addresses the congestion itself, not only the pressure on a nerve. The blood simply returns by other routes, as it does after any vein is closed. This is a decision we make from your imaging and your symptoms before surgery rather than on the spur of the moment, and we will have discussed it with you.

When the problem is a vein being squeezed from outside. May-Thurner and Nutcracker are different in kind. There the vein is being compressed by an artery crossing over it, and tying vessels off will not fix that — it has to be opened from the inside. That is done by Dr. Jiyong Ahn, the vascular and interventional radiologist we work with, through a puncture in the groin or neck rather than an incision. There are two main things he does: opening the compressed vein with a stent, and pelvic vein embolization, which seals off damaged, refluxing pelvic veins. Both are outpatient procedures.

How the two fit together. These are not competing options and you do not have to choose. A patient often has both a vascular problem and inflammatory tissue disease, and treating only one of them is exactly why some women still have pain after an otherwise complete operation. Where both are present, the vascular work and your excision surgery are planned together and sequenced deliberately — usually as separate procedures rather than one — so that each is done properly. If your imaging and your symptoms suggest a vein problem, we will say so and arrange the evaluation rather than leaving you to discover it years later.

Hysterectomy: what is — and is not — removed

What a hysterectomy actually removes. A point of frequent confusion: a hysterectomy does *not* mean removing the ovaries. A hysterectomy removes the uterus — usually with the cervix, though sometimes the cervix is left in place, and we will tell you which is planned — and usually the fallopian tubes. The ovaries are left in place. Removing an ovary is a separate procedure called an oophorectomy, and we almost never do it. Your hormones come from your ovaries, so keeping them means a hysterectomy does not put you into menopause at the time of surgery (though some studies suggest menopause may arrive a little earlier afterward).

Why ours is often a “modified radical” hysterectomy. In endometriosis, a simple hysterectomy is often not enough, because the disease extends beside the uterus. We frequently perform a modified radical hysterectomy, which also addresses the parametrium — the tissue alongside the uterus that contains blood vessels and nerves. Clearing disease from this area is more thorough, and it is done with careful attention to the nerves it contains, including freeing them from any disease or scar (neurolysis) to preserve their function. It is a more extensive operation, with a somewhat higher risk to bladder and bowel function, so we explain beforehand why we recommend it for you.

Treating adenomyosis surgically: adenomyomectomy

What adenomyosis is. Adenomyosis is endometriosis’s relative within the muscular wall of the uterus, and a major cause of pain and heavy bleeding.

What an adenomyomectomy is. An adenomyomectomy is the surgical removal of adenomyosis from the uterine wall, preserving the uterus. We perform it relatively rarely now — because for most patients we have a less invasive, uterus-sparing alternative that has changed how we treat this disease. That procedure is important enough that we describe it on its own below.

A note on the variety of steps. These are the procedures that most often make up endometriosis surgery, but they are not an exhaustive list — your operation includes exactly what your disease required, no more and no less. Each step that was performed will appear on your operative report and, where tissue was removed, in your pathology report.

A uterus-sparing treatment for adenomyosis: microwave ablation

Why this matters so much to us.

Adenomyosis is one of the major causes of pelvic pain and of fertility problems — and for a long time there was no good treatment short of hysterectomy. Microwave ablation changes that. It lets us treat adenomyosis without removing the uterus, and we are deeply committed to it because it spares the uterus, preserves the possibility of pregnancy, and is far less invasive than the alternatives.

Adenomyosis — endometriosis's close relative within the muscular wall of the uterus — has historically been difficult to treat. Medication often only masks it; surgical removal (adenomyomectomy) is invasive and weakens the uterine wall; and for years the definitive answer was hysterectomy, which ends fertility entirely. Energy-based ablation offers a different path: instead of cutting the adenomyosis out, we destroy it in place with precisely targeted heat, leaving the uterus intact.

How it works

Under real-time ultrasound guidance, a fine probe delivers energy directly into the adenomyosis, heating and destroying the diseased tissue while sparing the healthy uterine muscle and lining around it. The body then gradually reabsorbs the treated tissue, so the lesion and the uterus shrink over the following months. This is different from “endometrial ablation,” a treatment you may come across online that destroys the lining of the uterus to reduce bleeding and is not compatible with pregnancy; microwave ablation for adenomyosis targets the diseased muscle and leaves the lining in place. There are a few related energy types you may see named in the literature:

- **Microwave ablation (MWA)** — uses microwave energy through a thin needle-like probe; fast, with a large, reliable zone of treatment.
- **Radiofrequency ablation (RFA)** — uses radiofrequency energy to achieve the same goal of targeted, heat-based destruction of the lesion.
- **High-intensity focused ultrasound (HIFU)** — a completely non-invasive approach that focuses ultrasound waves from outside the body to a point inside the adenomyosis, with no probe inserted at all.

What the evidence shows

These techniques are increasingly used as uterus-sparing treatments for adenomyosis. Most of the published research comes from centers in Asia, much of it on HIFU and microwave ablation, and long-term data are still limited — but the results so far are consistent and encouraging:

- **Strong symptom relief.** In studies of microwave ablation, treatment substantially reduces the two most disabling symptoms — painful periods (dysmenorrhea) and heavy bleeding. Reported relief of period pain commonly ranges from roughly half to over three-quarters of patients, with parallel improvements in bleeding, anemia, and quality of life.²³

- **Real shrinkage of the disease.** Imaging confirms that a large proportion of the targeted tissue is destroyed (often around 80–90%), and the uterus measurably shrinks over the months after treatment.²³
- **A strong safety profile.** Serious complications are rare. Most side effects are minor and self-limiting — some lower abdominal pain, a low-grade fever, or light vaginal discharge for a short time afterward — reflecting how much less invasive this is than open surgery.²³

Fertility and pregnancy — the most hopeful part.

Because ablation spares the uterus and does not appear to harm ovarian reserve, it keeps the door to pregnancy open in a way hysterectomy never could. The published experience — largely from HIFU, with growing data for microwave and radiofrequency — reports encouraging pregnancy and live-birth rates with low complication rates, and treatment that does not measurably lower ovarian reserve (AMH).²⁴ Just as important, it avoids the deep cut into the uterine wall that adenomyomectomy requires — a cut associated with a meaningful risk of the uterus tearing in a later pregnancy. Ablation does not make that incision, and we expect the risk to be considerably lower. We will not put a number on it, because an honest one does not yet exist: rupture after ablation has been reported, but only in isolated cases, and the published experience is too small and too varied to say reliably how often it happens. What we can tell you is that it appears uncommon, that it is not zero, and that it is one of the reasons we ask you to wait at least twelve weeks before trying to conceive. The evidence base is still maturing and we discuss it honestly, but the direction is genuinely hopeful for patients who want to preserve fertility.

What to expect afterward

Two things are worth knowing in advance, because both surprise patients who were not told.

- **A thin, clear, watery discharge is normal.** After microwave treatment it is common to have a watery vaginal discharge, sometimes surprisingly heavy. It can last a few days or continue for several weeks. This is usually the treated tissue clearing rather than an infection. Call the clinical team if the discharge smells bad, or comes with fever, worsening pelvic pain, or heavy bleeding.
- **Wait at least twelve weeks before trying to conceive.** This is longer than the usual guidance after excision surgery, and it applies specifically to microwave ablation — the treated area of the uterine wall needs that time to heal and remodel before a pregnancy begins to load it.

Whether ablation is right for you depends on the pattern and extent of your adenomyosis and on your goals, and it is something we plan and discuss with you individually.

Calming pain and overactivity: our use of Botox

As part of treating the whole picture — not just the visible disease — we sometimes combine excision surgery with targeted injections of botulinum toxin (Botox), when there is an indication for it. Few centers offer this combined approach, and we believe it makes the treatment more complete: we remove all the endometriosis, and where a muscle or organ has become overactive or locked in spasm, we calm it at the same time.

Botox is well established and time-tested. Botox has been used safely in medicine for decades across an enormous range of conditions — from eye-muscle and movement disorders to migraine, overactive bladder, and muscle spasticity. It works by gently and temporarily blocking the nerve signal that tells a muscle to contract, which relaxes the muscle and quiets the associated pain. Its effect wears off over months, so it is not permanent, and its long safety record is one of the reasons we are comfortable using it — though safety in one use does not automatically carry over to another, which is why we describe each use separately below.

Bladder Botox

For patients whose bladder is overactive or painful — as it often is alongside endometriosis and interstitial cystitis — Botox can be injected into the bladder muscle during the same procedure. It relaxes the bladder, reducing urgency, frequency, and pain, and the benefit typically lasts several months. (Bladder Botox is approved for overactive bladder; using it for bladder pain is off-label — outside the approved uses, common in specialist practice, and something we will discuss with you.)

The main thing to understand: urinary retention. By relaxing the bladder, Botox can occasionally relax it enough that it does not empty completely — a temporary difficulty urinating called urinary retention, which may require using a small catheter for a short time until it resolves. **The risk is lower in younger patients** and rises with age. In older patients — and especially in those who are frail — the chance of retention is meaningfully higher, so we weigh it carefully and tailor the decision to you. For the young patients who make up much of our practice, bladder Botox is generally very well tolerated.²⁵ We check that your bladder is emptying properly, and if retention does occur, we will show you how to manage it — usually with a catheter for a short time — until it settles.

Pelvic-floor Botox

What the pelvic floor is. The pelvic floor is the sling of muscles supporting the pelvic organs. In many people with endometriosis these muscles become chronically tight and tender — a state called pelvic-floor hypertonicity or myofascial pain — which is itself a significant source of pelvic pain, painful sex, and bladder and bowel symptoms, and which often persists even after the disease is removed.

How Botox helps. Injecting Botox into these overtight muscles helps them release and relax, breaking the cycle of spasm and pain. The evidence is mixed, and we want to be straight about it. Reviews suggest it can reduce pain and improve quality of life when pelvic-floor physical therapy alone has not been enough, with few and self-limiting side effects.²⁶ A small randomized trial in women with endometriosis-associated pain and pelvic-floor spasm found less pain with Botox than with placebo,³⁴ while a larger trial in women with chronic pelvic pain more broadly found no clear benefit over placebo.³⁵ We think the difference lies in

choosing the right patient — someone whose pain is clearly driven by muscle spasm — and we use it that way, as an off-label treatment, alongside physical therapy.

What to expect after Botox — timing and how long it lasts

Whichever muscle we treat, three practical things are worth knowing, because they are what patients ask afterward and what causes needless worry when nobody has explained them.

- **It does not work immediately.** Botox takes time to take effect — typically a few days to begin, with the full benefit usually arriving somewhere around one to two weeks. If you are still sore in the first days afterward, that does not mean it has failed. It means it has not started yet. This is the single most common misunderstanding.
- **It wears off, and that is by design.** The effect is temporary, generally lasting on the order of several months before the muscle gradually regains its normal activity. That is not a drawback so much as a safety feature — nothing is permanently altered, and if the result was not what you hoped, it does not last either.
- **It can be repeated.** If it helped and the benefit is fading, the treatment can be given again. We will talk about timing at your follow-up. For many patients the goal is not indefinite repetition but a window of relief — a few months in which the muscle is quiet enough that pelvic floor physical therapy can finally make progress it could not make before.

BOTOX AND PHYSICAL THERAPY WORK TOGETHER

The Botox opens a window. The physical therapy is what makes the gain last.

A pelvic floor locked in spasm often cannot be released by therapy alone — it is too guarded to work with. Calming the muscle first is frequently what lets therapy succeed, which is why we so often recommend the two together rather than either on its own.

Uterine Botox

We are also among the relatively few centers exploring Botox injected into the uterine muscle itself, aimed at the uterine contractions and cramping that drive some patients' pain. This is an area of active innovation that we are helping to advance, and we will talk through with you what is known, what is still being studied, and whether it makes sense in your particular case. It is experimental: there is not yet good evidence that it works, and we offer it only after a full discussion of what is and is not known.

A complete approach, decided with you.

When there is an indication, combining excision with Botox — in the bladder, the pelvic floor, or the uterus — lets us treat both the disease and the muscle pain it leaves behind, in a single procedure. Whether any of these is right for you is something we decide together, based on your symptoms and your goals.

How to Read Your Pathology Report

After the recovery-room conversation — where we tell you what we did and show you the pictures — your pathology report is the next document you will receive, and in many ways it is the most important one of all. It is the formal, microscope-level record of exactly what was removed from your body and what it turned out to be. The conversation tells you the story of your surgery; the pathology report is the proof of what was taken out and what it contained.

This section explains how to read it, what the unfamiliar words mean, and why some samples come back positive for endometriosis while others do not. Pathology reports are written for doctors, so the language can be intimidating — our goal here is to make yours readable.

WHY PATHOLOGY SOMETIMES DIFFERS FROM WHAT WE DESCRIBED

Pathology is the final diagnosis. The surgeon's account is an expert impression formed in the operating room.

When we talk to you after surgery, we are telling you what we saw and what we deduced from it. That assessment is informed and usually accurate, but it is made with the eye rather than the microscope. So a specimen we described as endometriosis may come back negative, and tissue we removed because it looked abnormal may turn out to be something else — or the reverse.

This happens in every branch of surgery, including cancer surgery, where the operating surgeon's impression is likewise confirmed or revised by the pathologist. It is not a mistake and it does not mean the surgery was wrong. It is the system working as it should: we remove what we judge to be disease, and the laboratory gives the definitive answer. If your report differs from what we told you, we will go through it with you and explain what it means.

Everything we remove is sent to pathology

First, an important point of principle: **every piece of tissue we remove from your body is sent to the pathology laboratory.** Nothing we remove is discarded without being examined. (Disease we treat in place with energy — such as the lining of an endometrioma treated with argon, or adenomyosis treated with microwave ablation — is destroyed rather than removed, so it does not produce a specimen.) Each specimen is labeled with the exact location it came from, examined by a pathologist under the microscope, and reported back. That is why your report often lists many separate, numbered specimens: each one is a distinct place we took tissue from, documented on its own.

Why there are so many pieces: we excise widely

Surgery for endometriosis at our practice is a full excision — we cut the disease out completely rather than burning its surface, and we excise widely. That means we remove not only the obvious lesions but also a margin around them, and any nearby tissue that looks even slightly suspicious.

There is a specific reason for this. **Endometriosis can be microscopic.** Tissue that looks completely normal to the eye, sitting right next to a visible lesion, can already contain disease that has not yet announced itself — and could go on to cause problems if left behind. By excising widely, we remove disease you cannot see yet, which is a central reason our approach aims to be thorough and lasting.

This is also why your report will list many pieces — and why some will be positive and some negative. Because we deliberately take margins and suspicious-looking areas, it is completely expected that some specimens come back showing endometriosis and others come back showing none. That mix is not a mistake or a sign of over-treatment; it is exactly what thorough excision looks like on paper.

Positive and negative samples are both normal.

Seeing “no endometriosis identified” on some specimens does not mean we removed healthy tissue unnecessarily. It means we sampled widely, including areas that only looked suspicious — and a clear result helps document the true extent of your disease.

A map of where samples come from

Your report identifies each specimen by its anatomical location. The terms can be unfamiliar, so here is a map of the pelvis and abdomen, grouped by region, with each location named the way it is likely to appear on your report and described in plain language. Not every patient has disease in every area — your report will list only the places we sampled in your operation.

The reproductive organs and pelvis

On your report	Where it is, in plain language
Ovary / endometrioma (endometriotic cyst)	A cyst of endometriosis on the ovary. Because these cysts are fused into the ovary, a small amount of normal ovarian tissue sometimes comes with it — so you may see “endometrioma with ovarian tissue.” We take great care to preserve your ovary; this note simply reflects how attached the cyst was.
Fallopian tube (salpingectomy)	A fallopian tube that was removed — usually only when it is blocked and swollen (a hydrosalpinx) and would not help fertility, and only with your prior permission.
Pelvic sidewall (left / right)	The wall of the pelvis that the ovary rests against, lined by a layer of tissue called peritoneum. Disease here is removed from the left, the right, or both.
Ovarian fossa	The hollow just beneath where the ovary sits — a very common hiding place for endometriosis.

On your report	Where it is, in plain language
Posterior cervical / uterosacral	The area behind the uterus, where the uterus and the top of the vagina meet, including the ligaments there. A frequent site of deep disease.

The nerves, ureters, and deep pelvis

On your report	Where it is, in plain language
Periureteral (left / right)	The tissue on top of or surrounding the ureters — the tubes that carry urine from each kidney down to the bladder. Disease here is carefully lifted off the ureter.
Hypogastric (left / right)	A layer of peritoneum overlying the hypogastric nerves — major nerves of the pelvis, one on each side. Removing disease here protects nerve function.
Rectovaginal	The space where the rectum and the vagina meet, low in the pelvis — a classic location for deep, nodular endometriosis.
Vagina (partial)	If disease has grown into the vaginal wall, a small portion of vagina may be removed with it and repaired.

The bowel and rectum

On your report	Where it is, in plain language
Rectum / sigmoid	Segments of the lower large bowel where endometriosis commonly lands.
Perirectal (left / right)	The tissue immediately around the rectum, on either side.
Rectal mesentery (mesorectum)	The fatty, blood-vessel-rich tissue that anchors the rectum — disease in this area sits deep behind the uterus and vagina.
Bowel segment (resection)	If a portion of bowel had to be removed (a resection), the full segment is sent — from either the large bowel or, less often, the small bowel.

The bladder, abdominal wall, diaphragm, and appendix

On your report	Where it is, in plain language
Bladder dome / bladder	The top and surface of the bladder. A larger nodule removed from the bladder may include some bladder lining (mucosa), which is then repaired.
Anterior abdominal wall	The front wall of the abdomen, which can occasionally harbor disease — sometimes within an old surgical scar.

On your report	Where it is, in plain language
Diaphragm	The muscle beneath the lungs. Endometriosis can settle on it (more often on the right), and is removed when present.
Appendix	Frequently involved in endometriosis, so it is examined and, when indicated, removed. If it is clear, the report will say “normal appendix.”

This is a general overview; depending on your operation there may be additional sites. Any area of disease we find is sampled, labeled, and reported the same way.

What the findings mean

Beyond the location of each specimen, your report states what the pathologist found in it. Here is how to interpret the results you are most likely to see.

Endometriosis — present, or not

- **“Endometriosis identified” (positive).** The hallmark tissue of endometriosis — endometrial-type glands and stroma, often with signs of old bleeding — was confirmed in that specimen. This is the microscopic proof of disease at that location.
- **“No endometriosis identified” (negative).** That particular piece did not contain disease under the microscope. As above, this is normal and expected on some specimens because we excise widely and sample suspicious-looking areas.

If every specimen comes back negative. Occasionally all the samples are negative. That means the pathologist did not find endometriosis in the tissue examined — it does not, on its own, rule out endometriosis everywhere, because a pathology report describes the tissue that was sent, not every part of your body.¹³ We interpret the result alongside what we saw during surgery, the samples we took, and your other findings, and we will explain what it means for your diagnosis. If endometriosis is not the explanation for your symptoms, we will talk with you about what else may be — your symptoms still deserve answers.

Other important findings

Endometriosis is not the only thing the pathologist looks for. Several other findings are meaningful, and may explain your symptoms even when endometriosis is limited or absent.

- **Fibrosis (scarring).** In patients who have had prior surgery or a lot of inflammation, a specimen may show fibrosis — dense scar tissue — rather than active endometriosis. This matters: fibrosis can cause real problems of its own, for example by tightening around and compressing nearby nerves. Finding and removing it is an important result, not an incidental one.
- **Adenomyosis.** Adenomyosis is endometriosis's relative inside the muscular wall of the uterus. When tissue removed from or near the uterus is examined, it can come back as adenomyosis — a significant finding that often helps explain heavy or painful periods.
- **Uterus and ovaries (if removed).** If your procedure included a hysterectomy, the uterus (and, very rarely, an ovary) is sent for full examination. We almost never remove ovaries, so this is uncommon — but when tissue is removed, it is always documented.

- **Normal tissue.** A specimen may simply be reported as normal tissue from its location — again, expected given how widely and carefully we sample.

If we took an endometrial biopsy

In some cases, while you are asleep, we look inside the uterine cavity with a small camera (a hysteroscopy) and take a tiny sample of the uterine lining — an endometrial biopsy. One important reason we do this is to check for chronic endometritis, a low-grade, often silent inflammation of the uterine lining.

This is where the term **CD138** comes in. CD138 is a special stain the pathologist applies to your biopsy that lights up plasma cells — a type of immune cell that should not normally be present in the endometrium. If plasma cells show up on the CD138 stain, that points to chronic endometritis.

Why it matters. Chronic endometritis is easy to miss and usually causes no obvious symptoms, but it is associated with difficulty conceiving and with early pregnancy loss — and, importantly, it is treatable, typically with a course of antibiotics. So a positive CD138 is a genuinely useful finding: it identifies a treatable problem that might otherwise have gone unnoticed — though how it is read depends on the laboratory and your clinical picture, and treating it does not by itself guarantee a pregnancy. A negative CD138 simply means no significant plasma cells were seen, which is reassuring.

Reading your three records together

By the time your pathology report arrives you will have three accounts of the same operation: what we told you in the recovery room, the operative report, and the pathology report. Many patients set them side by side and read them against one another, line by line, looking for places where they do not match.

We understand that impulse completely. Most people who reach us have spent years being told their pain was exaggerated or imagined, and have learned, reasonably, to check everything for themselves. That instinct protected you. We would simply like to save you some distress, because these three documents are not three attempts to say the same thing — and reading them as though they were will produce mismatches that are not errors.

Why they do not line up word for word

- **They are written at different moments, for different readers.** The update after surgery happens minutes after your operation and is spoken, in plain language, to convey what we found and what it means. The operative report is a clinical document written for the medical record. The pathology report is a laboratory analysis of tissue. Different purposes produce different words for the same finding.
- **One is seen, the other is proven.** What we describe to you is what the surgeon observed directly; the pathology report is the microscopic confirmation that follows. Where they differ, pathology is the final answer — and a difference between them is the expected relationship between the two, not a contradiction.
- **Mixed results are the normal result.** Because we excise widely and sample suspicious areas, a single operation commonly produces many specimens, of which some return

positive for endometriosis and others do not. That pattern is what thorough surgery looks like. A negative specimen does not cancel out a positive one.

- **Counts and names will differ between documents.** The number of specimens, how they are labelled, and the anatomical terms used are set by how tissue was submitted and processed in the laboratory. They will not map one-to-one onto what you were told verbally, and that is a feature of how specimens are handled rather than a sign that something is unaccounted for.

WHAT WE WOULD ASK OF YOU

Read all three as one picture rather than as three statements to be reconciled — and bring your questions to us.

If something in your records does not seem to fit, ask. That is a far better use of your energy than trying to resolve it alone, and we would genuinely rather spend the time with you than have you worrying over a wording difference for weeks. You are entitled to understand your own records, and we are glad to go through them with you.

We hope this brings clarity.

Most of your report should be self-explanatory once you have this guide beside it — that is exactly why we wrote this section. If anything is unclear, one of our doctors will be glad to review it with you. Keep your pathology report together with your operative report, your recording and your photographs; together they give you the fullest picture of your surgery.

Additional Instructions for Specific Surgeries

If your surgery involved one of the situations below, follow these additional instructions alongside the general recovery guidance above.

If you had bowel surgery (repair or resection)

- **Diet — a low-residue diet.** Eat foods that are broken down more completely by the gut, and avoid those that are not — such as foods high in insoluble fiber (for example, kale), seeds, or large amounts of whole grains. Add these foods back gradually as your bowel movements normalize.
- **Expect changed bowel movements** for up to 6 months. Most patients have looser, more frequent stools at first; these gradually return toward their previous consistency over time.
- **Constipation: check with us before taking any laxative or suppository.** Call the clinical team and we will tell you what is safe for the repair you had.
- **If you are traveling home by plane,** consult us before booking your return, and get up to walk every 1 to 2 hours during the flight.

If you had a hysterectomy

- **Pelvic rest for 12 weeks** (longer than the standard 6 weeks): no sex, tampons, douching, or anything inserted into the vagina until your physician clears you.
- **No baths, swimming, or hot tubs for 8 weeks.**
- **All other activity, wound, diet, and pain instructions** follow the general recovery guidance above.

If you go home with a Foley catheter

Some patients — including those traveling home from out of town — go home with the Foley catheter still in place for a couple of days. This is not a problem, and it is straightforward to manage at home. The catheter is a thin, soft tube that drains your bladder into a bag, held in place by a small water-filled balloon. Below is how to care for it, prevent problems, and remove it when the time comes.

The two bags: leg bag and night bag

You will have two bags, and you alternate between them:

- **A leg bag during the day,** worn strapped to your thigh under your clothing so you can move around. It is smaller, so empty it every 2 to 3 hours.
- **A larger bag at night,** which holds more so you do not have to get up to empty it while you sleep. Switch to this one at bedtime, and change back to the leg bag in the morning.

Always keep the bag below the level of your bladder so urine drains away from you and cannot flow back. Hang the night bag on the bed frame — never rest it on the floor.

Preventing blockage — especially overnight

The most important thing is to keep urine flowing freely so the catheter does not get blocked, which is most likely to happen at night while you are still:

- **Keep the tubing free of kinks and loops.** Make sure you are not lying on the tube, and that it is not bent or trapped under your leg or the bedding while you sleep.
- **Switch to the larger night bag at bedtime** so the bag does not fill and back up overnight, and keep it hanging below the level of your bladder on the bed frame.
- **Leave a little slack in the catheter** using the leg-bag straps during the day, so it does not pull or pinch.
- **Stay well hydrated.** Drinking enough fluid keeps urine flowing and helps prevent the catheter from clogging.
- **Watch that urine is actually draining.** If the bag stops filling, or you feel pressure or fullness in your bladder, check first for a kink — and if it does not resolve, call us (see below).

Keeping it clean

- Wash your hands thoroughly with soap and water before and after handling the catheter or bag.
- **To empty a bag:** open the drain port into the toilet, then clean the port with soap and water and re-close it.
- **To switch bags:** wash your hands, empty the bag you are taking off, clean both connection points with soap and water, pinch the tubing just above the connection, disconnect, attach the other bag, and release.
- Cleanse around the area where the catheter exits your body once a day with soap and water.

Removing your catheter

Remove your catheter at home only if your discharge instructions say you may, and only after we have shown you how. If you had bladder or ureter surgery, your catheter is protecting a repair — do not remove it yourself; we will remove it at the time we tell you. When home removal is part of your plan, it is simple:

1. **Cut across the catheter** with clean scissors at the spot we show you (above where the small balloon line is).
2. **The balloon empties on its own** — the water in the little balloon that holds the catheter in place drains out through the cut.
3. **Gently slide the catheter out.** Once the balloon is deflated, the tube usually comes out easily, with little discomfort. If you feel resistance, or no water drains from the cut, stop — do not pull — and call us.

Prefer not to remove it yourself? That is completely fine. If you are not comfortable removing the catheter on your own, you can always come in and we will remove it for you. Just call the office to arrange a time.

If you still cannot urinate after the catheter is out

Once the catheter is removed, the great majority of patients urinate normally. Occasionally — it is unusual, but it can happen — the bladder is still not ready and you find you cannot urinate. If that happens, call us right away. If you cannot reach us quickly — after hours, or if you are traveling — go to the nearest emergency room to have a catheter placed. Do not wait more than six hours, and do not wait at all if your bladder feels painfully full. You would then keep it for another couple of days until your bladder recovers. This is rare, but it is always a possibility to be aware of — especially for patients traveling home.

Call the office if:

- You have a fever over 100.4°F (38°C). With a catheter in place we want to know about any fever — do not wait to see whether it settles, as you would otherwise.
- Your urine has a strong, foul odor, or you see blood clots.
- Urine is leaking around the catheter, or the catheter comes out on its own.
- You have pain or fullness in your lower abdomen.
- There is little or no urine flowing into the bag (after checking for a kink).

Do not wait it out. If little or no urine is draining after you have checked for a kink, or you feel painful fullness, call us right away — and if you cannot reach us quickly, go to the nearest emergency room. You should produce at least 100 cc (mL) in three to four hours.

Follow-Up and Staying in Touch

Your post-operative visit

Please schedule your follow-up appointment for two to three weeks after your surgery, unless your discharge plan gives a different time, by calling our main office. New or worsening symptoms should not wait for this visit — contact us sooner. Here is how the visit works.

What the visit is for

The post-operative visit has three purposes, and it is built around them:

- **To make sure you are healing well** — checking your incisions and your overall recovery.
- **To address any issues** — any symptoms, concerns, or questions you have as you recover.
- **To tell you what to expect next** — your recovery timeline, your pathology results, and your next steps, including fertility plans where relevant.

Who you will see — and why it may not be your surgeon

Here is something we want you to know in advance, because we would rather you hear it from us now than be surprised later. **Your post-operative visit may be conducted by a member of our team other than the surgeon who performed your operation.** For example, if Dr. Vidali performed your surgery, it is entirely possible that another one of our doctors will see you for your follow-up. This is our normal practice, and it is deliberate.

Why we work this way. We are a very high-volume center, and our surgeons spend most of their time operating. Routine recovery visits are therefore often with another member of the ESSI team. Whoever sees you will have your records — your photographs, your operative report and your pathology — and can check your healing, go over your results and plan your next steps with you.

When you want your surgeon. If you have a question about a specific surgical decision, an unexpected finding, or a concern that needs your surgeon's input, tell us and we will bring your surgeon in. And if you would particularly value speaking with your operating surgeon, let the office know, so we can arrange what is possible and tell you when.

This is how high-volume centers work. Being seen at a follow-up by a member of the surgical team — another physician, or an advanced practice provider such as a nurse practitioner or physician assistant — rather than by the operating surgeon personally is standard practice at busy surgical centers everywhere, including the largest academic medical centers. It is widely accepted precisely because it works: it expands access so patients are seen promptly, lets surgeons concentrate on operating, and delivers excellent follow-up care. Patient satisfaction with this model is consistently high.²⁹

You can always reach your surgical team.

Team-based follow-up is how we handle routine recovery visits; it is not a limit on the care you can reach. If you have a concern, contact us — you do not need to be sure it is a complication to raise it — and we will make sure the right clinician, including your surgeon when needed, looks at it.

Bring your questions — there is a page for them at the back of this handbook — and your medication list. Before the visit ends, we want you to understand your plan, any results still pending and who will follow them up, and whom to contact if you need more help.

Two tracks after surgery: pain and fertility

After surgery, what matters most differs from patient to patient. Some come to us mainly to be free of pain; others mainly to have a baby; many want both. So we think of your ongoing care as following one or both of two tracks — a pain track and a fertility track — and we tailor your follow-up to whichever fits your goals. Most of the disease-removing work is done in the operating room; these tracks are about getting you the rest of the way to the life you came here for.

The pain track

If your central goal is relief from pain, surgery is the foundation — but for some patients pain has more than one source, and a thorough excision is meant to be paired with attention to whatever else is driving symptoms. On the pain track, we help you investigate and address those remaining contributors:

- **Pelvic-floor and neuromuscular pain.** Tight, spasming pelvic-floor muscles are a common source of pain that persists after disease is removed. We can direct you to specialized pelvic-floor physical therapy and, where indicated, the muscle-directed treatments described earlier (such as Botox) to calm overactive muscle.
- **Nervous-system and central pain.** When pain has become “wired in” — a sensitized nervous system that keeps signaling even after the source is gone — we can guide a plan aimed at calming and retraining those pathways, rather than simply chasing the pain with more medication.
- **The immune and inflammatory picture.** Because endometriosis is an inflammatory, immune-driven disease, some patients’ symptoms reflect an inflammatory state that surgery alone does not fully resolve. We bring our reproductive-immunology perspective to reviewing this and advising on how it might be addressed.
- **Bladder, bowel, and related symptoms.** Lingering urinary or bowel symptoms have their own pathways and treatments, and we help you sort out and target what remains.

The point of the pain track is that we do not consider our job finished when the disease is out. We help you methodically work through what is left, so that everything that can be resolved, is.

The fertility track

If having a baby is part of why you are here, your surgery was performed with that goal in mind — ovary-sparing, anatomy-restoring, and timed around your reproductive plans. After surgery, the fertility track is where we help you make the most of the window surgery opens.

- **When to start trying.** For most patients hoping to conceive naturally, we suggest beginning to try once your six weeks of pelvic rest are over and we have cleared you — and we treat the first year as the most fertile window (see “If you are hoping to conceive” in your recovery section). If you had microwave ablation for adenomyosis, the wait is longer: at least twelve weeks. We will give you timing tailored to your situation.
- **Guidance on your cycles and protocols.** Our practice is led by a reproductive endocrinologist, so we can advise on how to pursue your cycles — whether you are trying naturally, with timed intervention, or through IVF — and review the protocols your fertility plan involves.
- **A reproductive-immunology perspective.** Endometriosis is also an immune disease, and the immune and inflammatory environment can affect implantation and early pregnancy. While we no longer perform extensive immunological testing as a routine, we remain deeply versed in this area: we can review immune-focused plans and protocols (for example for patients with a history of recurrent pregnancy loss), offer a considered second opinion, and at minimum give you informed guidance — an expertise very few endometriosis practices have at all.
- **A thin uterine lining.** If the lining of your uterus stays too thin for an embryo to implant despite the usual treatment, we now offer uterine PRP. It is described just below.
- **Coordinated, not fragmented.** Because surgery, fertility, and immunology live together in our practice, you are not handed off between disconnected specialists — your plan is reviewed by people who understand all three.

Uterine PRP: a newer option for a thin lining

For an embryo to implant, the lining of the uterus (the endometrium) has to grow thick enough to receive it. In some women it stays thin despite estrogen and the other usual measures — after scarring or earlier procedures, or for no clear reason — and a thin lining is linked to lower pregnancy rates and to transfers that fail one after another.

What PRP is. PRP stands for platelet-rich plasma. It is made from a small sample of your own blood, spun down to concentrate the platelets, which carry the growth factors the body uses to repair tissue. Because it comes from your own blood, there is no donor and nothing foreign to react to.

How we do it. Many clinics simply infuse PRP into the cavity of the uterus through a thin catheter, the way an embryo is transferred, where much of it can wash straight back out. We do it differently: under direct vision with a hysteroscope, we inject the PRP just beneath the lining, into the layer that regenerates the endometrium each cycle. It is a short procedure, and we plan its timing with you around your embryo transfer or the cycles in which you are trying to conceive.

An honest word on the evidence. PRP for a thin lining is promising, and it is new. Pooled studies report that the lining grows thicker by about 1.5 to 2 millimeters on average after treatment, and about 4 in 10 women in those studies became pregnant in the cycle that followed.³⁸ But most of the studies are small, many have no comparison group, and methods vary from clinic to clinic — so no one can yet say how much of that benefit comes from the PRP itself. We offer it to selected patients, usually when a thin lining has not responded to standard treatment, and we will tell you plainly what it can and cannot be expected to do.

Egg freezing: a real decision, not a reflex

One question many patients have is whether to freeze their eggs, and our position — drawn from the published evidence and from Dr. Vidali's book on endometriosis and fertility — is deliberately precise rather than promotional. We do not believe every woman with endometriosis should freeze her eggs; that is a knee-jerk, and an expensive one. Nor do we believe in “wait and see,” which can quietly cost a woman her best eggs. Egg freezing is a specific decision with specific indications, and we are glad to advise you on whether and when it makes sense for you.

The key fact that drives the timing: surgery on an endometrioma lowers ovarian reserve.

Removing an ovarian cyst takes some healthy ovarian tissue with it — measures of egg supply (AMH) fall by up to about 30% after surgery on one ovary, and up to about 44% when both are operated on.^{15 · 17} This is not an argument against operating; it is the reason the timing of egg freezing relative to surgery matters so much.

The default, when it applies: freeze before surgery. If you want future children and are heading for endometrioma surgery, the strongest moment to bank eggs is usually *before* the operation — while the ovary is intact and reserve is highest — provided the ovaries can be safely accessed. Freezing afterward means freezing from an ovary the surgery has already diminished. (Of course, for many patients this decision comes up before surgery; we include it here so that, going forward, you understand how we think about it.)

Who benefits most — the situations where we most strongly consider freezing first:

- **Endometriomas on both ovaries (especially over 3 cm)** — both ovaries are at risk, so the reserve hit is greatest.
- **An endometrioma on a single (solitary) ovary** — there is no second ovary to compensate.
- **Recurrence after a prior endometrioma surgery** — a second operation compounds the reserve already lost to the first.
- **Declining reserve or older age** — when the clock, not the disease, is the dominant problem, securing inventory first is often the priority.

When freezing is usually not needed: a small endometrioma under 3 cm on one ovary with good reserve — there, reserve is protected and we freeze only if other factors (age, goals) tip the balance. And one important caution that runs throughout our philosophy: freezing eggs is not a reason to rush into endometrioma surgery,

and the evidence does not support operating on an endometrioma simply to improve IVF.

We will help you think this through.

Egg freezing is an individualized decision, not a formula — and one where having a reproductive endocrinologist who also understands the surgery is a real advantage. Whether you are considering it before surgery or weighing it now, we are glad to talk through your reserve, your timeline, and realistic expectations, including how many eggs would give you a meaningful chance and how many cycles that might take.

Long-term follow-up

Your relationship with us does not end at the post-operative visit. We recommend a longer-term check-in about one year after your surgery, including a repeat ultrasound. The purpose is to confirm that you are doing well, to look for any early signs of recurrence, and to revisit your symptoms, your fertility plans, and anything that has changed over the year. For most patients this annual look is reassuring; for the occasional patient it lets us catch and address something early.

Our long-term results: about 8% reoperation at five years.

In our own practice, at five years of follow-up we reoperate on about 8% of our patients. We want to be straightforward about where that number comes from: it is our own internal analysis, and it counts the patients we ourselves reoperated on. A few patients are lost to follow-up, and a patient who had a second operation elsewhere would not appear in our count — so the real figure carries a margin of roughly five percentage points either way. Published figures are measured in many different ways, so we do not offer this as a direct comparison — but it reflects the central idea of this whole handbook: a complete, thorough first operation is the best protection against needing a second.

Hormones after surgery: our approach

Patients often expect to be put on hormones immediately after endometriosis surgery, because that is common practice. We decide case by case, and in one important respect our approach differs from what many practices do. Here is how we think about it.

Why we do not routinely use GnRH agonists or antagonists after surgery

We do not routinely put our patients on GnRH analogues — the agonists and antagonists (such as leuprolide or the newer oral agents) — after surgery. These drugs work by shutting down the ovaries and forcing the body into a temporary, profound low-estrogen state — essentially a medical menopause. After a complete excision, we believe that cost usually outweighs what they can add.

What the studies show, and how we read them. Studies do show that hormonal suppression after surgery reduces recurrence, and we take that seriously.³¹ Our reasoning is about what the drug is suppressing: these treatments quiet disease activity, and in many of the operations studied, disease was left behind. When the disease has been completely excised, we believe there is much less for a GnRH drug to act on — so for most of our patients, its costs outweigh what it can add. That is a judgment from our practice and our surgical results, not something the trials have settled.

GnRH analogues also carry genuine downsides:

- **They cause significant side effects.** Hot flashes, mood and sleep disturbance, vaginal dryness, joint pain, and — importantly — measurable loss of bone density, even within a six-month course. This is why their use is generally capped at about six months and often requires “add-back” hormones just to make them tolerable.³⁰
- **They delay, rather than help, conception.** For the many patients who had surgery in part to conceive, months of ovarian shutdown simply postpone the very window surgery was meant to open — the opposite of what we want.

So our position is straightforward: we put our effort into removing the disease completely the first time, which we believe is the best protection against recurrence. If you are already taking one of these medicines, or need one later, that is a decision we make with you — it does not mean your surgery failed.

How we think about hormonal contraception

Hormonal contraception (the pill and similar options) is a different and more open question, and we approach it case by case. We want to be honest about two things.

- **The evidence is real, but it does not apply equally to everyone.** The largest systematic review found that hormonal suppression after surgery cut the risk of recurrence by more than half,³¹ and the European guideline recommends considering a hormonal IUD or a combined pill for 18 to 24 months after surgery to keep painful periods from returning.¹³ Those studies varied in how complete the original surgery was and in how they measured recurrence, and the benefit is not the same for every treatment or every person.
- **Many of our patients do not tolerate it well.** People with endometriosis frequently find oral contraceptives hard to tolerate — mood effects, breakthrough bleeding, headaches, low libido, and other symptoms are common in this group — and that has to be weighed against the benefit.

So we stay open-minded rather than dogmatic. For some patients — for example, those who want reliable contraception anyway, or who get genuine symptom relief from it — hormonal contraception is a good choice, and we are happy to support it. For others, it is neither necessary nor helpful. We decide together, based on your symptoms, your goals, and how your body responds. Taking hormones does not mean your surgery was unsuccessful, and choosing not to take them comes with a clear follow-up plan.

Contact us**Office (all non-emergent matters):** 516-584-8710**Email:** clinical@essidoctors.com

Please allow 24–48 hours for a response during normal business hours. Our team can answer most questions and will bring in your surgeon when needed.

These numbers are not a substitute for 911 in an emergency. For a medical emergency, call 911 or go directly to the emergency room.

We are honored to care for you. Please keep this handbook close, bring your questions to every visit, and remember — the most important step is the first one.

Checklists and Tear-Out Cards

These pages are made to be used. Tick them in the book, or cut along the dashed line and keep each card where it is needed — on the fridge, in your hospital bag, or in your companion's pocket.

Card 1 Your countdown to surgery — two weeks out to the morning of

Card 2 What to buy before surgery

Card 3 Your home and your hospital bag

Card 4 For your companion: questions for the update after surgery

Card 5 Medicine and temperature log for the first days at home

Card 6 Your follow-up visit — and the questions to bring

Card 7 When to call — keep it by the phone

Fill in Card 4 before surgery. Write down every question you can think of, then hand it to the person who will be with you. They will hear the update while you are still in recovery, and the card makes sure nothing you wanted to know gets missed.

✂ Cut along the dashed line — or keep it in the book.

CARD 1 · BEFORE SURGERY**Your countdown to surgery****TWO WEEKS BEFORE**

- ☐ Surgical clearance visit booked with your primary care doctor, if the hospital asks for one
- ☐ Written medication plan received from us — blood thinners, diabetes, GLP-1 and other medicines
- ☐ Herbal medicines stopped, and any aspirin you take on your own
- ☐ Driver home and an adult to stay with you the first night arranged
- ☐ Any new illness — cold, fever, cough, urinary infection — reported to us
- ☐ If you hope to have children and have an endometrioma: egg freezing discussed with us

ONE WEEK BEFORE

- ☐ Every GLP-1 medicine stopped, weekly or daily (Ozempic, Wegovy, Rybelsus, Mounjaro, Zepbound and others). Took a dose by mistake? Call us

FIVE DAYS BEFORE

- ☐ Ibuprofen (Motrin, Advil) and other anti-inflammatories stopped
- ☐ Fish oil, high-dose vitamin E, turmeric and iron stopped
- ☐ Blood thinners: following your written plan — not stopped on your own

THE DAY BEFORE

- ☐ Last solid food at 12 noon — clear liquids only after that
- ☐ **Bowel prep, if you were given one:** 2 bisacodyl 5 mg tablets at 4 pm; MiraLAX mix from 4:15 pm and again from 7 pm
- ☐ Shower and hair wash; belly button cleaned carefully. No lotion, oil, perfume or talc afterward
- ☐ No alcohol, no smoking
- ☐ First carbohydrate drink in the evening (ask us first if you have diabetes)
- ☐ Phones charged — yours and your companion's — for the recording

MORNING OF SURGERY

- ☐ Second carbohydrate drink, finished 2 hours before your surgery time
- ☐ Aprepitant with a small sip of water 2 hours before — only if we prescribed it
- ☐ Only the morning medicines your written plan says to take
- ☐ Nothing by mouth from 2 hours before your surgery time
- ☐ Card 4 filled in and handed to your companion

✂ Cut along the dashed line — or keep it in the book.

CARD 2 · SHOPPING

What to buy before surgery

MEDICINES AND SUPPLIES

- ☐ Ibuprofen 200 mg tablets
- ☐ Acetaminophen 500 mg tablets
- ☐ Simethicone 125 mg tablets, for gas
- ☐ Colace (docusate) 100 mg, stool softener
- ☐ MiraLAX (polyethylene glycol)
- ☐ Dulcolax 10 mg suppositories
- ☐ A thermometer
- ☐ Sanitary pads — not tampons, for six weeks
- ☐ A pill organizer or written medication chart
- ☐ Compression stockings, 15–30 mmHg, if you are flying home

FOR THE DAY BEFORE

- ☐ Carbohydrate drink: Ensure Pre-Surgery, ClearFast, Nutricia preOp — or full-sugar Gatorade (not red or purple)
- ☐ Bowel prep, if you need one: 2 bisacodyl 5 mg tablets, 238 g MiraLAX, 64 oz clear liquid

COMFORT AND FOOD

- ☐ A small firm pillow to hold against your belly
- ☐ Extra pillows or a wedge, for sleeping propped up
- ☐ A heating pad
- ☐ Loose, high-waisted clothing; underwear a size up
- ☐ Slip-on shoes
- ☐ Lip balm and dry shampoo
- ☐ Protein drinks or shakes
- ☐ Peppermint or ginger tea
- ☐ Easy food that needs no cooking
- ☐ Fragrance-free moisturizer or silicone gel, for scar massage later
- ☐ A notebook for questions

Skip straws and fizzy drinks — both make you swallow air, and trapped gas is already uncomfortable.

✂ Cut along the dashed line — or keep it in the book.

CARD 3 · HOME AND HOSPITAL

Your home and your hospital bag

BEFORE YOU GO IN

- ☐ A place to rest that is not upstairs, if you have stairs
- ☐ Everyday things moved to waist height
- ☐ Easy food stocked: no standing, lifting or chopping
- ☐ Prescriptions filled in advance, if you can
- ☐ Help arranged for the first week — properly, not vaguely
- ☐ Childcare, pet care and school runs covered
- ☐ Water bottle, phone charger and medication list by the bed
- ☐ Laundry and food shopping done

YOUR HOSPITAL BAG

- ☐ Photo ID and insurance card
- ☐ A list of every medicine and supplement, with doses
- ☐ Surgical clearance paperwork, if you were asked for it
- ☐ Loose clothes to go home in, and slip-on shoes
- ☐ Phone and a long charging cable
- ☐ Glasses, inhaler, CPAP machine if you use one
- ☐ Something to read — waiting takes longer than you expect
- ☐ Toothbrush and basics, in case you stay
- ☐ This handbook, and Card 4 for your companion

Most patients go home the same day. Pack anyway — and if you are having spinal morphine, you will be staying overnight.

✂ Cut along the dashed line — or keep it in the book.

CARD 4 · FOR YOUR COMPANION

Questions for the update after surgery

Fill this in before surgery and give it to the person who will be with you. A member of the surgical team who was in your operation will speak with them as soon as it is over.

Patient: _____ **Date of surgery:** _____

Companion: _____ **Phone:** _____

BEFORE THE UPDATE STARTS

- ☐ Phone recording — audio or video — where the hospital allows it
- ☐ Ask to see the photographs as they explain

THE UPDATE COVERS THESE SEVEN THINGS — TICK EACH ONE

- ☐ **1** How you are doing right now
- ☐ **2** What was found — shown on the photographs
- ☐ **3** What was done, and why
- ☐ **4** Anything left or treated differently, and why
- ☐ **5** Anything unexpected during the operation
- ☐ **6** What was sent to pathology, and when results come back
- ☐ **7** The plan for the next hours and days

OUR OWN QUESTIONS

Ideas: Was endometriosis where the scans suggested? Were the ovaries and tubes left in place? Was the bowel, bladder or a ureter involved? Was the appendix removed? Was Botox given? Will there be a catheter, or an overnight stay? Is there anything to watch for tonight?

- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐

NOTES FROM THE UPDATE

✂ Cut along the dashed line — or keep it in the book.

CARD 5 · FIRST DAYS AT HOME

Medicine and temperature log

Daily limits: Tylenol (acetaminophen) 4,000 mg · Motrin (ibuprofen) 2,400 mg. Call us for a temperature over 100.4°F (38°C) that persists or returns across two days, any reading over 102.2°F (39°C), or any fever with a catheter in place.

Day / time	Medicine	Dose	Temp	Notes — pain, nausea, bowels, walking

✂ Cut along the dashed line — or keep it in the book.

CARD 6 · FOLLOW-UP

Your follow-up visit

Two to three weeks after surgery, unless your discharge plan says otherwise. New or worsening symptoms should not wait for this visit.

Appointment: _____ **With:** _____

BRING WITH YOU

- ☐ This handbook and your medication list
- ☐ Your recording and photographs, if you have them
- ☐ Your pathology report, if it has arrived

WHAT I WANT TO UNDERSTAND

- ☐ What the pathology showed, and what it means for me
- ☐ How my recovery is going, and what is still normal
- ☐ When I can return to work, exercise, sex, swimming, travel
- ☐ My fertility plan, if pregnancy is a goal
- ☐ Whether I need hormones, physical therapy or other treatment next
- ☐ Any result still pending, and who will follow it up

MY QUESTIONS

- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐

✂ Cut along the dashed line — or keep it in the book.

CARD 7 · KEEP BY THE PHONE

When to call

CALL 911 OR GO TO THE NEAREST EMERGENCY ROOM

- Chest pain, or sudden shortness of breath
- Fainting, or heavy bleeding with dizziness
- Very hard to wake, confused, or breathing slowly or shallowly
- Thoughts of harming yourself — or call or text 988

CALL US RIGHT AWAY · 516-584-8710

- Temperature over 100.4°F (38°C) that persists or returns across two days, or any reading over 102.2°F (39°C) — or any fever with a catheter in place, or with worsening pain, a swollen belly, vomiting or redness
- Pain that is climbing rather than easing, or not touched by your medication
- Nausea or vomiting that will not settle, or you cannot keep your medicines down
- Foul-smelling or green discharge, from the vagina or an incision
- Soaking more than two maxi pads an hour for two hours or more
- A belly that is swollen, firm or painful — especially with no gas passing
- Unable to urinate for six hours, or sooner if your bladder is painfully full — if you cannot reach us quickly, go to the emergency room
- Spreading redness, warmth or pus around an incision
- Pain or swelling in one calf

If you cannot reach us and you are worried, do not wait: go to the nearest emergency room, and call us on the way.

EMAIL — FOR THINGS THAT CAN WAIT A DAY

Clinical questions and refills clinical@essidoctors.com

Scheduling and surgical paperwork surgery@essidoctors.com

Appointments, insurance and billing frontdesk@essidoctors.com

References & sources

The clinical positions in this handbook reflect the published literature and the practice of ESSI (internationalendo.com). For each source below, we note the finding it supports and why it matters.

Why we remove the appendix

1. Moulder JK, Siedhoff MT, Melvin KL, Jarvis EG, Hobbs KA, Garrett J. Risk of appendiceal endometriosis among women with deep-infiltrating endometriosis. *Int J Gynaecol Obstet.* 2017 Nov;139(2):149–154. (Coincidental appendectomy in 395 women: appendiceal endometriosis in 13.2% overall, 11.6% with superficial endometriosis, and 39.0% with deep infiltrating endometriosis; the majority of affected appendices appeared normal.)
We cite this because it is the key evidence that appendiceal involvement rises sharply with the severity of endometriosis — and that most affected appendices look normal — which is the basis for examining and, when indicated, removing the appendix.
2. Gustofson RL, Kim N, Liu S, Stratton P. Endometriosis and the appendix: a case series and comprehensive review of the literature. *Fertil Steril.* 2006;86(2):298–303. (Appendiceal endometriosis in ~4% of women with biopsy-proven endometriosis or right-lower-quadrant pain, versus ~0.4% in the general population.)
We cite this because it shows the appendix is involved about ten times more often in women who have endometriosis than in the general population, while remaining rare overall.
3. Kohn J, McHale M. Appendectomy in Chronic Pelvic Pain — The True Prevalence of Appendiceal Endometriosis: A Systematic Review and Meta-Analysis. *J Minim Invasive Gynecol.* 2024;31(11). (Pooled prevalence of histologically proven appendiceal endometriosis was 8% (95% CI 6–11%) when appendectomy was performed incidentally, and 66% (95% CI 34–88%) when only an abnormal-appearing appendix was removed; the authors conclude routine appendectomy should be considered a standard component of endometriosis excision surgery. 29 studies; 6,111 appendectomies performed during gynecologic surgery; histologically proven appendiceal endometriosis in ~8% on incidental removal.)
We cite this because it is the pooled, multi-study estimate of how often the appendix is involved when it is removed routinely — about one in twelve.
4. Allahqoli L, et al. Appendiceal Endometriosis: A Comprehensive Review of the Literature. *Diagnostics (Basel).* 2023. (Across studies, appendiceal endometriosis is found in ~7% of women at gynecologic surgery, range 1–44%; incidental appendectomy was associated with no significant complications in the reviewed series.)
We cite this because it confirms both that involvement is common enough to look for and that removing the appendix during endometriosis surgery is safe.
5. Selective Appendectomy in Patients Undergoing Minimally Invasive Surgery for Endometriosis: A Retrospective Cohort Study. *J Clin Med.* 2025;14(20):7277. doi:10.3390/jcm14207277. (236 patients, January 2024 to April 2025. Abnormal appendiceal pathology in 216 of 236 (91.5%): adhesions 59.3%, fibrous obliteration 34.8%, appendiceal endometriosis 14.4%, inflammation 8.5%, and neuroendocrine tumors in 3 patients (1.3%). Appendiceal endometriosis was associated with advanced-stage disease.) High

prevalence of appendiceal pathology at histology, including disease present without visible surface implants; no intraoperative complications.)

We cite this because it reinforces that disease can be confirmed only on pathology, since a normal-looking appendix can still harbor it.

Why we are a fully robotic practice

6. Role of robot-assisted laparoscopy in deep infiltrating endometriosis with bowel involvement: a systematic review and application of the IDEAL framework. 2024; PMC11208225. (11 studies, 364 robotic and 83 standard laparoscopic patients; longer operating time in the robotic group, but shorter hospital stay and fewer postoperative complications — major and minor complications 4.4% and 6.4% robotic versus 3.6% and 22.9% standard; anastomotic leak 0.6% robotic.) With review literature on the technical characteristics of the platform (e.g., “Is It the Best Option? Robotic Surgery for Endometriosis” and similar narrative reviews). (Describes the platform’s 3D high-definition magnified vision, wristed/articulating instruments, tremor filtration, and improved surgeon ergonomics for precise dissection.)

We cite this because it documents the specific technical advantages — vision, dexterity, stability, ergonomics — on which our preference for a robotic approach rests.

7. Robotic assisted versus laparoscopic surgery for deep endometriosis: a meta-analysis of current evidence. J Robot Surg. 2024;18:212. doi:10.1007/s11701-024-01954-2. (14 studies, 2,709 patients; no significant difference in intra- or postoperative complications, conversion, or blood loss; robotic cases had longer operative time and hospital stay.)

We cite this honestly: the best current evidence shows robotic surgery is at least as safe and effective as laparoscopy — non-inferior rather than proven superior — which is the balanced basis for our conviction.

Shoulder pain, gas pain, and low-pressure surgery

8. Clinical and patient-education reviews of post-laparoscopic referred pain (e.g., recovery-after-laparoscopy guidance from gynecologic surgical units). (Residual carbon dioxide collects beneath and irritates the diaphragm and phrenic nerve, felt as referred shoulder pain; typically begins the day after surgery, peaks ~day two, and resolves within days; eased by early mobilization and simple analgesia.)

We cite this because it explains the mechanism and the expected course of shoulder pain, and why walking and ordinary pain relief help.

9. Sarli L, Costi R, Sansebastiano G, Trivelli M, Roncoroni L. Prospective randomized trial of low-pressure pneumoperitoneum for reduction of shoulder-tip pain following laparoscopy. Br J Surg. 2000;87(9):1161–1165. Supporting randomized data in laparoscopic hysterectomy (Bogani G, Ghezzi F, et al.) and a systematic review of low- vs standard-pressure pneumoperitoneum. (Low pressure, ~9–10 mmHg vs ~12–14 mmHg, reduces shoulder-tip pain and analgesic need without compromising the operation.)

We cite this because it is the randomized evidence behind our deliberate use of low gas pressure to reduce your shoulder pain.

10. Studies of abdominal distension after laparoscopy and of CO2 pneumoperitoneum physiology. (Carbon dioxide retained in the abdominal cavity causes distension and

bloating; CO₂ is used precisely because it is highly soluble and is rapidly reabsorbed across the peritoneum and cleared through respiration.)

We cite this because it explains what gas pain actually is, why it is temporary, and why movement — which helps the gas shift and clear — is the most effective remedy.

Temporary diverting stoma (ileostomy / colostomy)

11. Literature on temporary diverting ileostomy/colostomy to protect a downstream anastomosis (e.g., Ileostomy, StatPearls/NCBI; systematic reviews and cohorts showing diverting stoma reduces anastomotic leak rate by roughly one-third to one-half; Cleveland Clinic patient guidance on ileostomy, colostomy, and ostomy reversal). (A loop ileostomy/colostomy temporarily diverts stool away from a healing bowel join to reduce the risk and consequences of an anastomotic leak; it is typically reversed once healing is complete; stoma care is supported by a wound-ostomy-contenance nurse.)

We cite this because it grounds our explanation of why a temporary stoma is occasionally created to protect a bowel repair, that it is temporary and reversible, and that it substantially reduces the risk of a dangerous leak.

Post-operative bowel and recovery guidance

12. Post-operative recovery guidance for minimally invasive gynecologic surgery and bowel-resection discharge instructions from major institutions (e.g., academic gynecology programs; NIH MedlinePlus large- and small-bowel resection discharge instructions). (Constipation is common after surgery and with opioids; passing gas and tolerating food are reassuring; stool softeners, polyethylene glycol, and milk of magnesia are standard measures; low-residue diet and gradual food reintroduction after bowel resection.)

We cite this because our bowel-care instructions follow well-established post-operative guidance, adapted to our patients.

Excision, ablation, and sparing the ovary

13. ESHRE Endometriosis Guideline Development Group. ESHRE guideline: endometriosis. Hum Reprod Open. 2022;2022(2):hoac009. (Clinicians may consider excision instead of ablation to reduce endometriosis-associated pain — a weak recommendation. For ovarian endometrioma, recommends cystectomy over drainage and coagulation to reduce recurrence, and considers cystectomy and CO₂ laser vaporisation comparable beyond the first year. Recommends considering a 52 mg levonorgestrel IUD or a combined hormonal contraceptive for 18–24 months after surgery to prevent painful periods returning. Notes that negative histology does not entirely rule out endometriosis.)

We cite this because it is the international guideline on these questions — including the points where it differs from our own practice, which we state rather than omit.

14. Paik H, Jee BC. Impact of Ablation Versus Cystectomy for Endometrioma on Ovarian Reserve, Recurrence, and Pregnancy: An Updated Meta-Analysis. Reprod Sci. 2024 Jul;31(7):1924–1935 (erratum Reprod Sci. 2024 May;31(5):1429). (6 RCTs and 5 prospective cohorts. Post-operative AMH significantly higher after ablation than cystectomy. Overall recurrence higher after ablation, RR 1.51, 95% CI 1.08–2.12. Pregnancy rates similar, OR 1.18, not significant.) Supported on the recurrence question by: plasma-energy ablation versus cystectomy, retrospective cohort of 176 women, Reprod Biomed Online 2025 (48-month ipsilateral recurrence 23.7% vs 26.6%, log-rank p = 0.866); and a 2025 systematic review

and meta-analysis of cystectomy versus ablative methods (recurrence RR 0.61, 95% CI 0.37–1.01, $p = 0.054$, not significant; no difference in pregnancy).

We cite this because it is the strongest pooled evidence that ablation preserves ovarian reserve better than stripping — and because it is also the source that reports higher recurrence after ablation, which we state rather than omit. The two supporting studies, using modern energy, found no significant recurrence difference; that disagreement is real and we present it as such.

15. Raffi F, Metwally M, Amer S. The impact of excision of ovarian endometrioma on ovarian reserve: a systematic review and meta-analysis. *J Clin Endocrinol Metab.* 2012;97(9):3146–3154. (AMH declines by roughly 30% after unilateral and about 44% after bilateral endometrioma cystectomy.)

We cite this because it puts a number on what stripping can cost — about 30% of AMH after one ovary and about 44% after both — which is why we spare the ovary.

16. Rius M, Gracia M, Ros C, Martínez-Zamora MÁ, deGuirior C, Quintas L, Carmona F. Impact of endometrioma surgery on ovarian reserve: a prospective, randomized, blinded, self-controlled pilot study (n = 16) comparing stripping with CO2 laser vaporization. *J Int Med Res.* 2020;48(6). In patients with bilateral endometriomas (within-patient design; ClinicalTrials.gov NCT03826355), 2020; supported by Muzii et al. and Var et al. (The ovary treated by ablation retained higher antral follicle count and ovarian volume than the contralateral ovary treated by stripping in the same patient.)

We cite this because its within-patient design — ablation on one ovary, stripping on the other in the same woman — is unusually informative about the effect of technique, though the study was small and used CO2 laser rather than the argon we use.

Fertility preservation and egg freezing in endometriosis

17. ESHRE Female Fertility Preservation Guideline (2022) and ESHRE Endometriosis Guideline (2022); with oocyte-cryopreservation reviews and AMH data (e.g., Cobo et al.; *Clin Exp Reprod Med* 2024). (AMH declines ~30% after unilateral and ~44% after bilateral endometrioma surgery; fertility preservation should be offered, and offered before cystectomy where retrieval is feasible; strongest candidates include bilateral endometriomas >3 cm, solitary-ovary endometrioma, and recurrence after prior surgery; target yields ~10–15 oocytes at age ≤35 and >20 at age >35; endometrioma surgery before IVF does not improve IVF outcomes.)

We cite this because it is the evidence behind our egg-freezing framework — the reserve cost of surgery, the preference for freezing before cystectomy, who benefits most, and the caution against operating on an endometrioma simply to improve IVF.

Recovery timeline, restarting exercise, and scar care

18. Abdominal Core Surgery Rehabilitation Protocol (Abdominal Core Health Quality Collaborative / ACHQC); and systematic review of the safety of core muscle training immediately after abdominal surgery (e.g., *Surg Endosc / BJS Open*, 2024). (Gentle deep-abdominal activation and walking can begin early and progress in stages to functional strengthening and cardio; supervised programs commonly begin around 2 weeks; early, graded core activity has not been shown to increase fascial-healing complications.)

We cite this because our staged return to exercise and core rebuilding — movement and breathing first, gentle activation next, progressive strengthening later — follows the physical-therapy rehabilitation literature.

19. Update on Postsurgical Scar Management. Semin Plast Surg, 2016; with concordant wound-care guidance from major surgical units. (Surgical wounds epithelialize within 1–2 days, so washing may begin ~48 hours postoperatively; scar massage should begin only after the wound is fully closed — around 2–3 weeks — performed gently for several minutes, once or twice daily, over at least 6 weeks; sun protection prevents hyperpigmentation; bruising and transient redness are expected.)

We cite this because our scar-care timing and technique — showering at 24 hours, beginning massage at 2–3 weeks once closed, and year-long sun protection — follow established scar-management evidence.

20. Tahmasbi Rad M, et al. Pregnancy after laparoscopic surgery for endometriosis: how long should we wait? Int J Gynaecol Obstet, 2023; with supporting cohort and review data on conception after endometriosis surgery. (Median time to pregnancy ~8 months; the first 12 months — with many pregnancies in the first 3–6 months — is the optimal window; trying at the earliest convenience after recovery is recommended; ART considered after 12 months in higher-stage disease.)

We cite this because our advice — begin trying once pelvic rest is over, roughly six to eight weeks after surgery, and treat the first year as the most fertile window — reflects the published evidence on conception after endometriosis surgery.

Operative reports and standardized (synoptic) documentation

21. Stogryn S, et al. Advancement in the quality of operative documentation: a systematic review and meta-analysis of synoptic versus narrative operative reporting. Am J Surg, 2019; 218(3):624–630; with Harvey A, et al. Surgery, 2007. (Structured/synoptic operative reports capture significantly more of the essential, required data elements than traditional narrative dictation, more consistently and with faster availability.)

We cite this because it is the evidence base for structured, synoptic operative reporting — the format we use to document your surgery.

22. American College of Surgeons, Commission on Cancer. Operative Standards (Standards 5.3–5.8), requiring synoptic-format documentation of key operative data elements for designated cancer operations (effective January 1, 2023); Katz MHG, et al. Technical Standards for Cancer Surgery: Improving Patient Care through Synoptic Operative Reporting. Ann Surg Oncol, 2022.

We cite this because it is the formal accreditation standard showing that organized surgery is moving toward structured, standardized operative reporting — the oncology example we use to illustrate the point.

Microwave / energy ablation for adenomyosis

23. Zhang HL, Yu SY, Li XL, Zhu JE, Li JX, Sun LP, et al. Efficacy and safety of percutaneous microwave ablation for adenomyosis in the posterior uterine wall. Br J Radiol. 2023;96(1151):20211301. With: Zhang, Ultrasound-guided percutaneous microwave ablation of adenomyosis: a narrative review, Ann Palliat Med (pooled ablation rate 79.7–91.3%, uterine volume reduction 55.2–64.9%, lesion volume reduction 64.9–93.1% at 12 months);

transvaginal ultrasound- and laparoscopy-guided PMWA cohort, *Int J Hyperthermia* 2019 (84% improvement in dysmenorrhea, 78% in menorrhagia at 12 months); and Microwave Ablation of Diffuse Uterine Adenomyosis, *ISGE / Trocar* 2025, doi:10.36205/trocar5.2025008 (dysmenorrhea VAS reduced 78%, menorrhagia improved in 92%, uterine volume reduced 40% at 6 months). (Significant reduction in dysmenorrhea and menorrhagia — commonly ~50–80%+ symptom relief — with uterine/lesion volume reduction; complications generally minor and self-limiting, e.g., transient lower abdominal pain, low-grade fever, vaginal discharge.)

We cite this because it is the basis for presenting microwave ablation as an effective, low-complication, uterus-sparing treatment for adenomyosis.

- 24.** Chen Y, Lin S, Xie X, Yi J, Liu X, Guo SW. Systematic review and meta-analysis of reproductive outcomes after high-intensity focused ultrasound (HIFU) treatment of adenomyosis. *Best Pract Res Clin Obstet Gynaecol.* 2024;92:102433. (10 studies, 557 women wishing to conceive: pooled pregnancy rate 53.4%, live birth rate 35.2%, with substantial heterogeneity; AMH not significantly changed at six months.) With: pregnancy outcomes after HIFU, single-centre retrospective study, *Int J Hyperthermia* 2025, which cites a 5.8% uterine rupture rate after adenomyomectomy and reports 3 cases of spontaneous uterine rupture among 333 HIFU pregnancies. We do not quote a rupture rate for ablation in the text: that figure comes from a single retrospective HIFU series, not from microwave ablation, and the published experience is too small to support a reliable number.

We cite this honestly: ablation appears to preserve fertility and ovarian reserve and reports encouraging pregnancy/live-birth rates with low complications, while avoiding the deep uterine incision that adenomyomectomy requires — though the evidence base is still maturing.

Botox — bladder, pelvic floor, and uterine

- 25.** Intravesical onabotulinumtoxinA for overactive bladder and interstitial cystitis/bladder pain syndrome (e.g., Kuo HC, et al.; Miotla P, et al. *Int Urogynecol J*, 2017, on retention risk). (100 U intradetrusor injection is effective; urinary retention/elevated post-void residual is the main adverse event, with older, frail, and multiparous patients at higher risk and younger patients at low risk.)

We cite this because it supports both the benefit of bladder Botox and our specific point that retention risk is small in younger patients and rises with age.

- 26.** Botulinum toxin A for pelvic-floor myofascial pain / chronic pelvic pain: systematic reviews and meta-analyses (e.g., *Int Urogynecol J*, 2022; systematic review, 2021) and randomized trials with mixed but generally favorable results. (Pain and quality-of-life improvement when pelvic-floor physical therapy is insufficient, with few self-limiting adverse effects; some RCTs show no difference versus active comparator.)

We cite this because we present pelvic-floor Botox honestly as a reasonable second-line option with supportive but not uniform evidence. Two newer randomized trials (references 34 and 35) show how mixed that evidence is.

Surgical volume, outcomes, and accreditation benchmarks

- 27.** British Society for Gynaecological Endoscopy (BSGE) Endometriosis Centres Accreditation Requirements (2025–2026). (To be a recognized accredited endometriosis

centre, the minimum requirement is 12 cases of deep endometriosis — invading bowel, bladder, or ureter — per gynaecological surgeon per year; centres operating well above this minimum are regarded as high-volume.)

We cite this because it is a recognized national benchmark for a specialist endometriosis centre, which gives a sense of scale for our group's roughly 600–700 cases a year; it is an accreditation minimum, not a world ranking.

28. Birkmeyer JD, Siewers AE, Finlayson EVA, Stukel TA, Lucas FL, Batista I, Welch HG, Wennberg DE. Hospital volume and surgical mortality in the United States. *N Engl J Med.* 2002;346(15):1128–1137. With: Birkmeyer JD, Stukel TA, Siewers AE, Goodney PP, Wennberg DE, Lucas FL. Surgeon volume and operative mortality in the United States. *N Engl J Med.* 2003;349:2117–2127; and Finks JF, Osborne NH, Birkmeyer JD. Trends in hospital volume and operative mortality for high-risk surgery. *N Engl J Med.* 2011;364:2128–2137. (Across 2.5 million patients and 14 high-risk operations, mortality fell as volume rose for every procedure examined; the same inverse relationship holds for individual surgeon volume.)

We cite this because it is the well-established basis for our statement that high surgical volume translates into better, safer outcomes for patients.

Team-based post-operative follow-up

29. Literature on advanced practice providers (nurse practitioners, physician assistants) and team-based surgical follow-up (e.g., implementation of physician assistants on surgical services improving continuity and case management; reviews describing APPs expanding access and patient satisfaction). (At high-volume surgical practices, routine follow-up visits are commonly conducted by members of the surgical team — other physicians or advanced practice providers — rather than the operating surgeon personally, expanding access while maintaining quality and high patient satisfaction.)

We cite this because it supports our explanation that team-based post-operative visits are standard, accepted practice at busy surgical centers and do not reduce the quality of routine follow-up care.

Post-operative hormones: GnRH analogues and contraception

30. Surrey ES. GnRH agonists in the treatment of symptomatic endometriosis: a review. *F&S Reports*, 2023; and narrative reviews of GnRH analogues for post-operative endometriosis. (GnRH agonists/antagonists induce a profound hypoestrogenic state with hot flashes, mood/sleep disturbance, and bone mineral density loss of roughly 4–7% even within 6 months — limiting use to ~6 months and typically requiring add-back therapy; any post-operative recurrence benefit is modest.)

We cite this because it documents the substantial side effects and limited durable benefit that underlie our position against routine post-operative GnRH analogue use, especially after complete excision and for patients wishing to conceive.

31. Zakhari A, Delpero E, McKeown S, Tomlinson G, Bougie O, Murji A. Endometriosis recurrence following post-operative hormonal suppression: a systematic review and meta-analysis. *Hum Reprod Update.* 2021;27(1):96–107. (Across 14 studies with 1,766 patients, post-operative hormonal suppression significantly reduced endometriosis recurrence compared with expectant management or placebo — RR 0.41, 95% CI 0.26–0.65 — and lowered pain scores. Follow-up and definitions of recurrence varied between studies, and the GnRH-agonist subgroup did not reach statistical significance.)

We cite this because it is the best pooled evidence on hormonal treatment after surgery, and it shows a real benefit — which is why we discuss hormonal contraception with you case by case rather than dismissing it.

The update after surgery: recordings and recall

- 32.** Tsulukidze M, Durand MA, Barr PJ, Mead T, Elwyn G. Providing recording of clinical consultation to patients — a highly valued but underutilized intervention: a scoping review. *Patient Educ Couns.* 2014;95(3):297–304. (Across the studies reviewed, about 72% of patients, on average, listened to their recorded consultations, many shared the recordings with family, and recordings improved recall and understanding of what was discussed.)

We cite this because it is the evidence behind our request that your companion record the update after surgery.

- 33.** Kessels RPC. Patients' memory for medical information. *J R Soc Med.* 2003;96(5):219–222. (Between 40% and 80% of medical information provided by healthcare practitioners is forgotten immediately; information organized into clear categories, and spoken information supported by written or visual material, is remembered better.)

We cite this because it explains why we record the update, show you photographs, and give it in the same structured format every time.

Pelvic-floor Botox: recent randomized trials

- 34.** Karp BI, Stratton P, et al. Botulinum toxin for endometriosis-associated chronic pelvic pain: a randomised, double-masked, parallel, phase 2 trial. *eClinicalMedicine.* 2026. PMID 41551998. (Small placebo-controlled trial in women with endometriosis-associated pain and pelvic-floor muscle spasm; Botox injected into the spasming pelvic-floor muscles was associated with less pain than placebo.)

We cite this because it is the most direct randomized evidence for pelvic-floor Botox in endometriosis — and, because it is small, a reason we present the treatment as promising rather than proven.

- 35.** Spruijt MA, Klerkx WM, Notten K, et al. The efficacy of botulinum toxin A injection in pelvic floor muscles in chronic pelvic pain patients: a double-blinded randomised controlled trial. *BJOG.* 2025. doi:10.1111/1471-0528.17991. (94 women with chronic pelvic pain and raised pelvic-floor muscle tone, all also receiving pelvic-floor physical therapy; at 26 weeks, 33% after 100 units of Botox versus 20% after saline had at least a one-third reduction in pain — not a statistically significant difference.)

We cite this because it did not show a clear benefit in a broad chronic-pelvic-pain population — which is why we reserve pelvic-floor Botox for carefully selected patients whose pain is driven by muscle spasm.

The appendix in severe endometriosis: an early report

- 36.** Ascher-Walsh CJ, Reich H, Vidali A, Evanko J, Rosenberg J. High frequency of appendiceal involvement in severe endometriosis [abstract]. *J Am Assoc Gynecol Laparosc.* 1999;6(3 Suppl):S3. (67 women with stage IV disease and an abnormal-appearing appendix: endometriosis in 44.8%, other pathology in 10.4%, normal in 44.8%; no complications from the appendectomy.)

We cite this because it is an early report, co-authored by Dr. Vidali, showing that the appendix is often involved in severe endometriosis, that removing it is safe, and that its appearance does not predict the pathology.

Stopping GLP-1 medicines before surgery

- 37.** American Society of Anesthesiologists. Consensus-based guidance on preoperative management of patients (adults and children) on glucagon-like peptide-1 (GLP-1) receptor agonists. 2023; and Kindel TL, Wang AY, Wadhwa A, et al. Multi-society clinical practice guidance for the safe use of glucagon-like peptide-1 receptor agonists in the perioperative period. *Surg Endosc.* 2025;39(1):180–183. (The 2023 guidance advised holding weekly GLP-1 medicines for a week before elective surgery and daily ones on the day of surgery. The later multi-society guidance allows most patients to continue, with a liquid diet the day before, and keeps the original timeline when the medicine is held.)

We cite both because our rule — every GLP-1 medicine, weekly or daily, stopped at least a week before surgery — is deliberately more cautious than the newer guidance, and you should know that it is a choice.

Uterine PRP for a thin lining

- 38.** Tang Z, Wei X, Li M. Intrauterine infusion and sub-endometrial injection of autologous platelet-rich plasma for thin endometrium: a systematic review and single-arm meta-analysis. *Turk J Obstet Gynecol.* 2026;23(2):190–198. (14 studies, 523 women having frozen embryo transfer: the lining was 1.6 mm thicker on average, about 1.9 mm after sub-endometrial injection; pooled clinical pregnancy 41.5% and live birth 23.6%, with no comparison group and very high variation between studies.)

We cite this because it is the most recent pooled evidence that includes injection beneath the lining — and because its limits are exactly why we call PRP promising rather than proven.

Neuropelveology: pelvic nerve entrapment and nerve tumors

- 39.** Possover M, Andersson KE, Forman A. Neuropelveology: an emerging discipline for the management of chronic pelvic pain. *Int Neurourol J.* 2017;21(4):243–246. (Describes the discipline: a neurological diagnosis of pelvic nerve disorders, confirmed by examining the pelvic nerves, with advanced laparoscopic surgery in selected patients.)

We cite this because it defines the approach we follow when pain points to the pelvic nerves rather than to endometriosis.

- 40.** Lemos N, Sermer C, Fernandes G, et al. Laparoscopic approach to refractory extraspinal sciatica and pudendal pain caused by intrapelvic nerve entrapment. *Sci Rep.* 2021;11. doi:10.1038/s41598-021-90319-y; and Lemos N, Marques RM, Kamergorodsky G, et al. Vascular entrapment of the sciatic plexus causing catamenial sciatica and urinary symptoms. *Int Urogynecol J.* 2016;27(2):317–319. (In 63 patients treated over ten years, 78% had at least halved their pain one year after laparoscopic nerve decompression — far fewer among long-term opioid users — with a 20% perioperative complication rate; the 2016 report describes pelvic vessels compressing the sciatic nerve and sacral roots.)

We cite these because they show that freeing a trapped pelvic nerve can relieve sciatic and pelvic pain — and because the complication rate is real and part of the conversation we have with you.

- 41.** Bayne H, Vuong RQ, Bal S, et al. Obturator nerve schwannoma: a case report and review of the robotic literature. J Surg Case Rep. 2024;2024(11):rjae694; and Di Furia M, Salvatorelli A, Della Penna A, et al. Advantage of laparoscopic resection for pelvic schwannoma: case report and review of the literature. Int J Surg Case Rep. 2018;45:38–41. (Pelvic schwannomas are rare, benign nerve-sheath tumors, often mistaken for ovarian masses; complete minimally invasive removal is the standard treatment, and nerve deficits were temporary in the reported robotic cases.)

We cite these because they support our approach to these tumors — and because, with so few cases in the literature, each decision is made individually.

Several entries above are supported by multiple converging sources rather than a single paper.