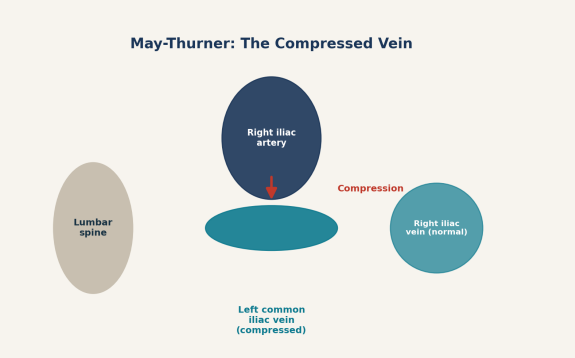
Understanding May-Thurner Syndrome

When the Left Leg Vein Gets Squeezed Shut

Recognize Left-Leg Swelling. Diagnose with Imaging. Treat with Stenting.



Online: https://go.riasalimd.com/mts-guide

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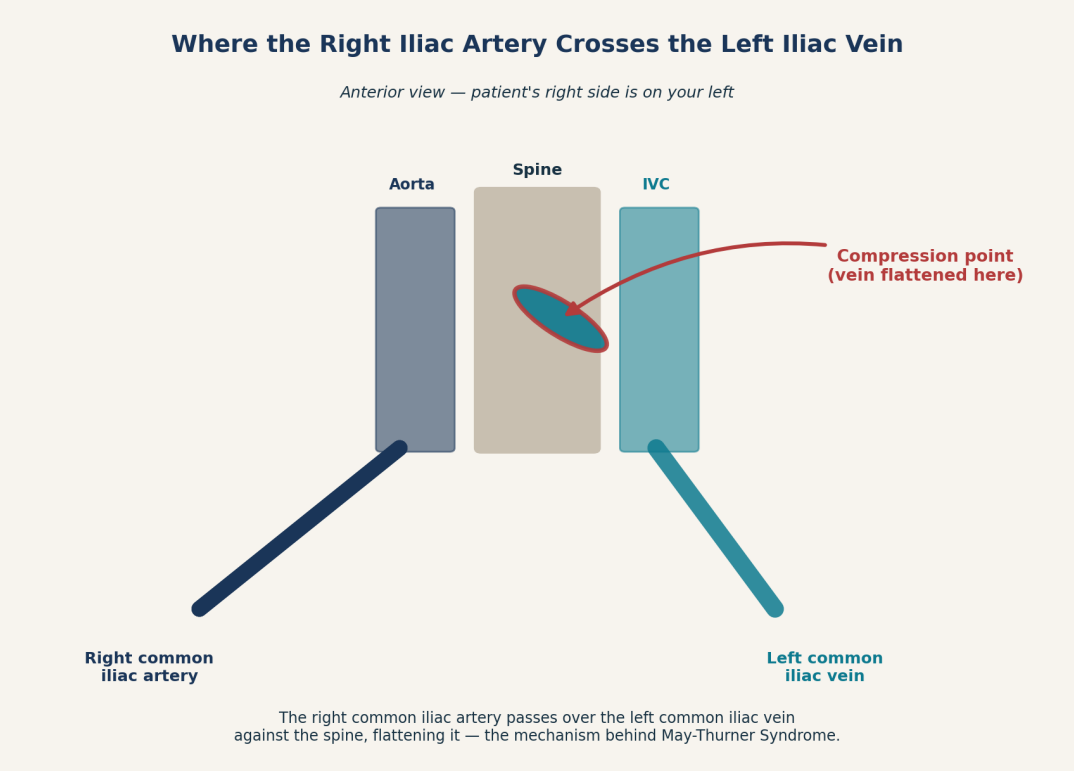
Names & Terms You Will Hear

Term	Meaning
May-Thurner Syndrome (MTS)	the formal name we use in your chart
Iliac vein compression syndrome	the descriptive name — the left iliac vein is squeezed
Cockett syndrome	named for Frank Cockett, who described the same finding in 1965
Iliocaval compression	broader term that includes the inferior vena cava (IVC) area
Left iliac vein compression	anatomic short form — the left vein is the one almost always affected
Non-thrombotic iliac vein lesion (NIVL)	MTS without an active blood clot — chronic compression and scarring
Post-thrombotic syndrome (PTS)	the chronic leg-swelling and skin changes that can follow a missed MTS-driven DVT

What Is May-Thurner Syndrome?

- May-Thurner Syndrome is when the right iliac artery presses on the left iliac vein where they cross in the pelvis. Imagine a soft drinking straw under a heavier rope.
- The squeezed vein narrows. Blood from the left leg has trouble getting back to the heart.
- Slow blood flow plus a damaged vein wall sets the stage for a deep-vein thrombosis (DVT) - a blood clot in the left leg.
- It is more common in women aged 20-50 and in pregnancy. Men can also have it; we look for it after any unexplained left-leg DVT.
- Many people have some compression without symptoms. The syndrome is the compression PLUS leg symptoms or a clot.



Anterior view of the pelvis: the right common iliac artery passes over and compresses the left common iliac vein against the spine — the exact anatomic mechanism behind May-Thurner Syndrome.

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Why It Matters

- MTS is the most common reversible cause of left-leg DVT. Missing it means the clot keeps coming back even on blood thinners.
- Without treatment, up to half of people develop post-thrombotic syndrome - chronic swelling, aching, and skin changes for life.
- MTS-related clots can dislodge and travel to the lungs (pulmonary embolism) - a life-threatening event.
- A simple stent can fix the underlying compression. Patency at 5 years is over 90 percent in experienced centers.
- Pregnancy raises MTS risk because the gravid uterus adds outside compression. Untreated MTS in pregnancy can cause large clots.

Treatment Options

- Anticoagulation (blood thinner): the foundation. DOACs (apixaban, rivaroxaban) for 3-6 months minimum after a DVT; longer if clot extends or compression remains.
- Compression stockings (20-30 or 30-40 mmHg, knee-high or thigh-high): reduce swelling and lower post-thrombotic syndrome risk.
- Catheter-directed thrombolysis (CDT): for new, large iliofemoral DVTs - dissolves clot to prevent post-thrombotic syndrome (CaVenT, ATTRACT trials).
- Iliac vein stenting: opens the squeezed segment with a metal mesh tube. Done after a clot is cleared, or for chronic non-thrombotic disease causing symptoms.
- IVC filter: temporary metal cage placed in the vena cava to catch clots. Used only when anticoagulation cannot be given.
- Surgical bypass or cross-pubic graft: rarely needed; reserved for failed stenting in complex anatomy.
- Long-term low-dose aspirin (or continued anticoagulation) for up to 12 months after stenting helps keep the stent open.

Risks, Benefits, and Alternatives

Every choice has trade-offs. Use this table to start the shared decision conversation.

Option	Risks	Benefits	Alternatives
Anticoagulation alone	Bleeding (1-3% major bleeding/yr), bruising, drug interactions.	Cuts new-clot risk by 70-90%. Once-daily or twice-daily pill. No procedure.	Add stenting if compression is significant; mechanical thrombectomy if early presentation.
Iliac vein stenting	Bleeding at access site, stent migration (rare), in-stent re-thrombosis (5-10%/yr without anticoagulation).	Patency 80-95% at 5 years. Resolves chronic swelling. Reduces clot recurrence dramatically.	Anticoagulation alone (slower symptom relief), conservative care with compression.
Catheter-directed thrombolysis	Bleeding (intracranial 0.5%, major 4%); not used in pregnancy or recent surgery.	Clears acute clot fast; reduces post-thrombotic syndrome by 30-50% in iliofemoral DVT (ATTRACT, CaVenT).	Anticoagulation alone (symptoms resolve more slowly), surgical thrombectomy.
IVC filter (retrievable)	Filter migration, fracture, IVC perforation. Long-term filters increase DVT risk.	Catches breakaway clots when blood thinners cannot be given.	Use only when anticoagulation truly cannot be started; remove as soon as feasible.

Common Misconceptions

Myth	Reality
If I had May-Thurner I would know - my leg would always hurt.	Most people with anatomic compression have no symptoms. The syndrome shows up suddenly as a DVT, or gradually as worsening leg swelling and aching.
DVTs always come from sitting too long on a plane.	Travel is one trigger. Anatomy (May-Thurner), pregnancy, hormones, and clotting disorders are equally important — especially when the left leg is involved.
Once my clot dissolves on blood thinners, I am cured.	If May-Thurner is the underlying cause, the compression is still there. Without addressing it, recurrence rate is high.
A stent inside a vein will fail like leg artery stents do.	Iliac vein stents have excellent long-term patency (>90% at 5 years in experienced hands) because veins are larger and lower pressure than arteries.
I should sit still and rest until the clot is gone.	Modern guidelines say walking is safe and helps. Rest only if you cannot tolerate walking. Compression stockings help during activity.
Pregnancy guarantees I will get May-Thurner.	Pregnancy raises risk but most pregnancies pass without DVT. Watch for left-leg swelling, especially after the second trimester.
The blood thinner pill is enough — I do not need imaging.	We need a CT or MR venogram (sometimes IVUS) to see the compression. Without imaging, the diagnosis is just a guess and the right treatment is missed.
Aspirin alone is enough after a stent.	After iliac vein stenting we usually use full anticoagulation (3-6 months) followed by aspirin or low-dose anticoagulation, depending on your bleeding risk.

Possible Complications

Knowing what can go wrong helps you spot problems early. Most complications are uncommon, especially with treatment.

Where / What	What Can Happen
Recurrent DVT	If the iliac compression is not relieved, the same leg can clot again. Stenting plus anticoagulation cuts recurrence dramatically.
Pulmonary embolism (PE)	Clots can break off from the left leg and travel to the lungs. PE is life-threatening - call 911 for sudden shortness of breath, chest pain, or fainting.
Post-thrombotic syndrome (PTS)	Chronic leg swelling, aching, brown-stained skin, and (in severe cases) ulcers. Can be lifelong. Stenting + compression stockings reduce risk.
Bleeding from anticoagulation	GI bleeding most common. Intracranial hemorrhage is rare but most feared. Treat reflux and ulcer disease, avoid NSAIDs, limit alcohol.
In-stent re-thrombosis	A clot can form inside the stent (5-10% per year without anticoagulation). Anticoagulation for 3-6 months after stenting cuts this dramatically.
Skin ulceration (advanced PTS)	Late complication of severe chronic venous hypertension. Prevention is the key — early diagnosis, early treatment of the underlying compression.

Points to Know

If you remember nothing else, remember these key points.

- Unexplained left-leg swelling, especially with aching or skin discoloration, deserves an evaluation for May-Thurner.
- After any unprovoked left-leg DVT, ask whether iliac compression has been imaged. CT venogram or MR venogram is the test.
- Take your anticoagulant exactly as prescribed. Missed doses are the most common reason a clot recurs.
- Walk daily. Wear graduated compression stockings during waking hours, especially long flights and long workdays.
- Stay hydrated. Avoid prolonged sitting without moving your legs.
- Tell every dentist, surgeon, and ER doctor that you take a blood thinner before any procedure or shot.
- Pregnancy and hormonal contraception change clotting risk. If you have MTS, discuss the safest option with your cardiologist or hematologist.
- After stenting, bring the stent ID card to every appointment. Imaging follow-up is at 1, 6, and 12 months.

When to Call Us - and When to Call 911

If you are not sure, call. We would rather hear from you twice than miss a real problem.

- Sudden swelling, redness, or tightness in one leg (especially the left) - call us today.
- Severe shortness of breath, chest pain, or coughing blood - call 911 (possible pulmonary embolism).
- Painful new lump in the leg or visible vein - tell us.
- Bleeding that does not stop with 10 minutes of pressure, blood in stool or urine, vomiting blood, or severe headache while on a blood thinner - call us right away.
- Stent area suddenly feels different (severe pain, new swelling) after stenting - call us.
- Pregnancy with new leg swelling or shortness of breath - tell your obstetrician AND us today.
- Missed dose of your blood thinner - call us before you decide what to do.
- Fever, chills, or hot/red skin over the affected leg - rule out infection.

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Trusted Resources

The links below are the trusted resources Dr. Ali used to write this guide and that he recommends you visit for more information. Each is a clickable link in the digital version and a Short.io tracked URL on the printed version.

- Cleveland Clinic - May-Thurner Syndrome - Plain-language overview of MTS for patients.
- Mayo Clinic - Deep Vein Thrombosis - Comprehensive DVT overview - symptoms to watch and prevention tips.
- National Blood Clot Alliance - Stop the Clot - Patient community, anticoagulation tips, travel guidance.
- CDC - Venous Thromboembolism - US prevalence and prevention information.

Sources Used to Build This Guide

Every recommendation in this guide is grounded in one or more of the studies, guidelines, or trusted resources below. Short links are tracked so Dr. Ali can see which references patients are reading; nothing personally identifying is captured.

- May R, Thurner J. The cause of the predominantly sinistral occurrence of thrombosis of the pelvic veins (1957) *[Landmark Paper]*
  Original anatomical description of left iliac vein compression by the overlying right iliac artery; defines the named syndrome.
- Cockett FB, Thomas ML. The iliac compression syndrome (1965) *[Landmark Paper]*
  Larger clinical series establishing iliac compression as a cause of left-leg deep-vein thrombosis.
- ATTRACT Trial — Vedantham S et al. Pharmacomechanical Catheter-Directed Thrombolysis for DVT (NEJM 2017) *[Clinical Trial]*
  Defines when adding catheter-directed thrombolysis (often paired with iliac stenting) reduces post-thrombotic syndrome severity.
- CaVenT Trial — Enden T et al. Long-term outcome after additional catheter-directed thrombolysis vs anticoagulation alone (Lancet 2012) *[Clinical Trial]*
  Showed reduced post-thrombotic syndrome at 24 months after thrombolysis for ileofemoral DVT — relevant for May-Thurner-driven clots.
- Hartung O et al. — Late results of stenting for chronic iliac vein obstruction *[Cohort]*
  Long-term patency data for iliac vein stenting in May-Thurner; supports stenting as a durable treatment.
- AVF / SVS — Practice Guidelines on the Management of Iliac Vein Compression / May-Thurner Syndrome (2018) *[Guideline]*
  Society of Vascular Surgery / American Venous Forum criteria for diagnosis (IVUS, MRV) and indications for stenting.
- Cleveland Clinic — May-Thurner Syndrome *[Patient Education]*
  Plain-language patient overview used to align our explanations with familiar phrasing.
- Mayo Clinic — Deep vein thrombosis (DVT) *[Patient Education]*
  Referenced for DVT symptom recognition and red-flag criteria patients can act on.
- National Blood Clot Alliance — Stop the Clot *[Patient Education]*
  Patient community resources for living with chronic anticoagulation.

About This Guide

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Reviewer note: Reviewed against Cleveland Clinic May-Thurner page, Mayo Clinic DVT page, and National Blood Clot Alliance resources. Ours adds: anatomy-specific pipe diagram, color-coded post-thrombotic risk grid, RBA framework for stenting decisions, expanded misconceptions, and post-procedure surveillance schedule.

Disclaimer

This guide is for educational purposes only and does not replace medical advice from your physician. Recommendations may not apply to every patient. Always follow the specific instructions of Dr. Ali and your care team. In an emergency call 911 or go to the nearest emergency department.

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