VISUAL CASE PRACTICE

Urology Clerkship Crash Course

Original figures. Decisions to explain. Cases to revisit.

26 lessons / two practice pages per lesson

Use the first page to make a prediction and write your reasoning. Turn the page for a figure, worked explanation, and a transfer question. Return to the matching video when a relationship remains unclear.

For clerkship practice, state the immediate concern, the evidence supporting it, and the next question for your supervising team. These exercises support education and supervised reasoning. Apply current local guidance to actual care.

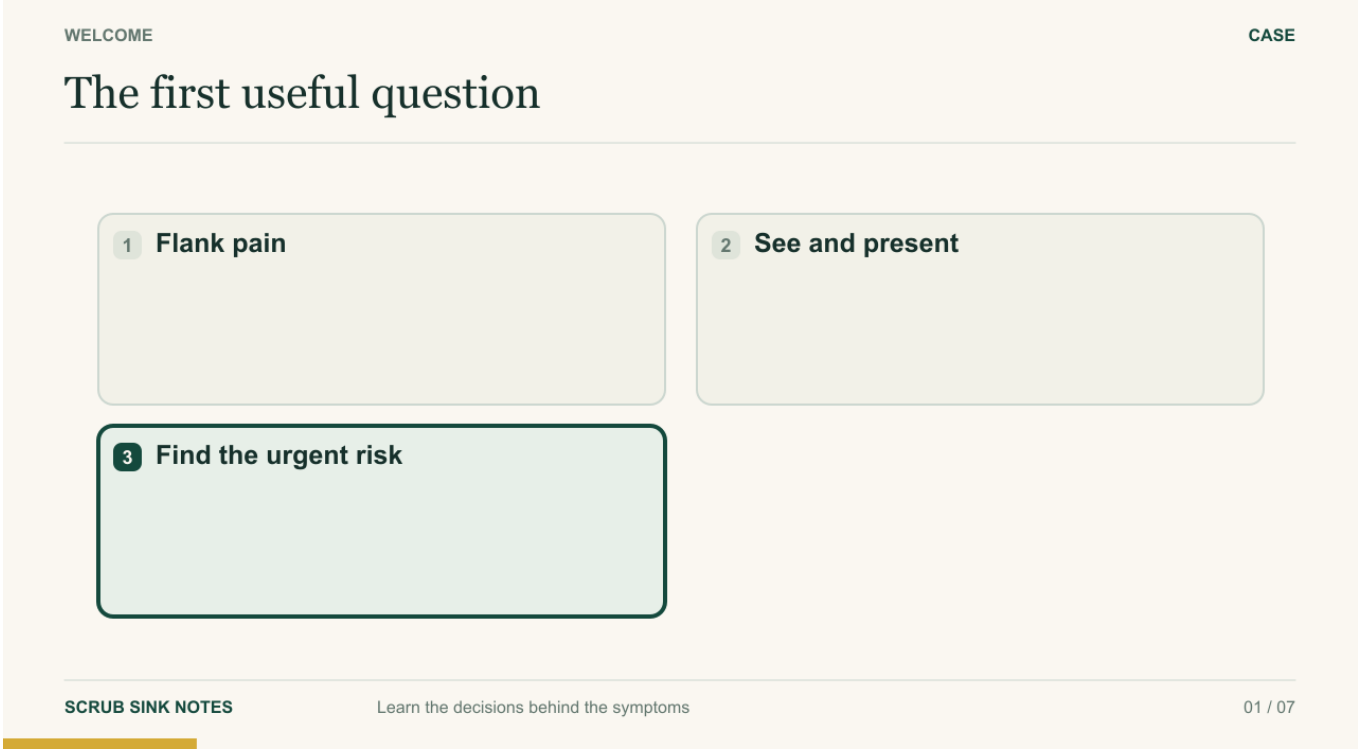
How to use these pages

1. Read the case and say your first decision.
2. Explain why the relevant findings belong together.
3. Compare your reasoning with the review page.
4. Change one important fact and reconsider.
5. Record one question to resolve with a reliable source or teacher.

LESSON 01 / TRY THE CASE

Learn the decisions behind the symptoms

Picture your first urology consult. The patient has flank pain. You have a chart, a scan, and a few minutes before you call the resident. The useful starting point is whether anything in this story makes waiting dangerous. This course will help you organize that decision and explain your reasoning.

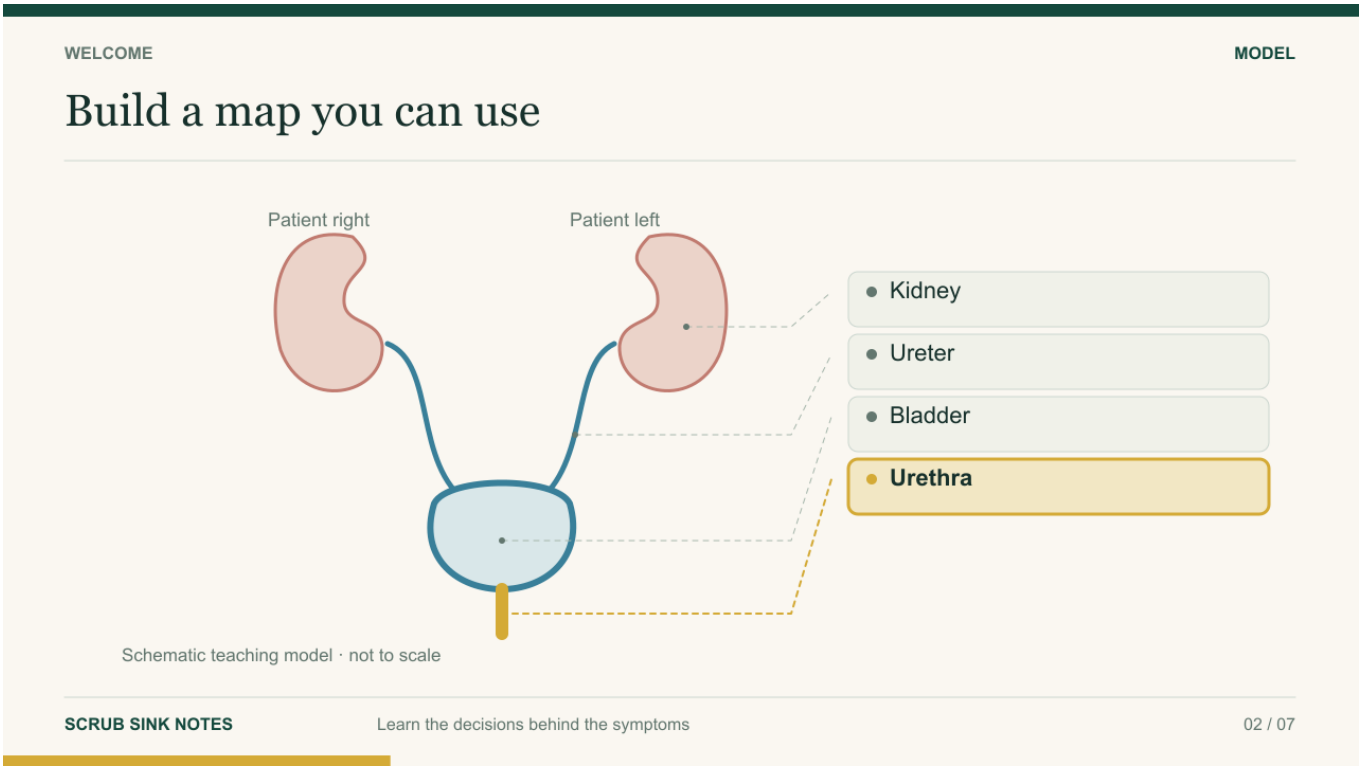


Your first response

What is the central decision? Which fact matters most? State an action and the reason for it.

LESSON 01 / REVIEW AND TRANSFER

Learn the decisions behind the symptoms



Keep this route in mind. The kidney makes urine, the ureter transports it, the bladder stores it, and the urethra lets it out. Infection, obstruction, bleeding, and failure of control create different problems along that route. We will return to the anatomy whenever it helps explain a symptom or a management choice.

Check the reasoning

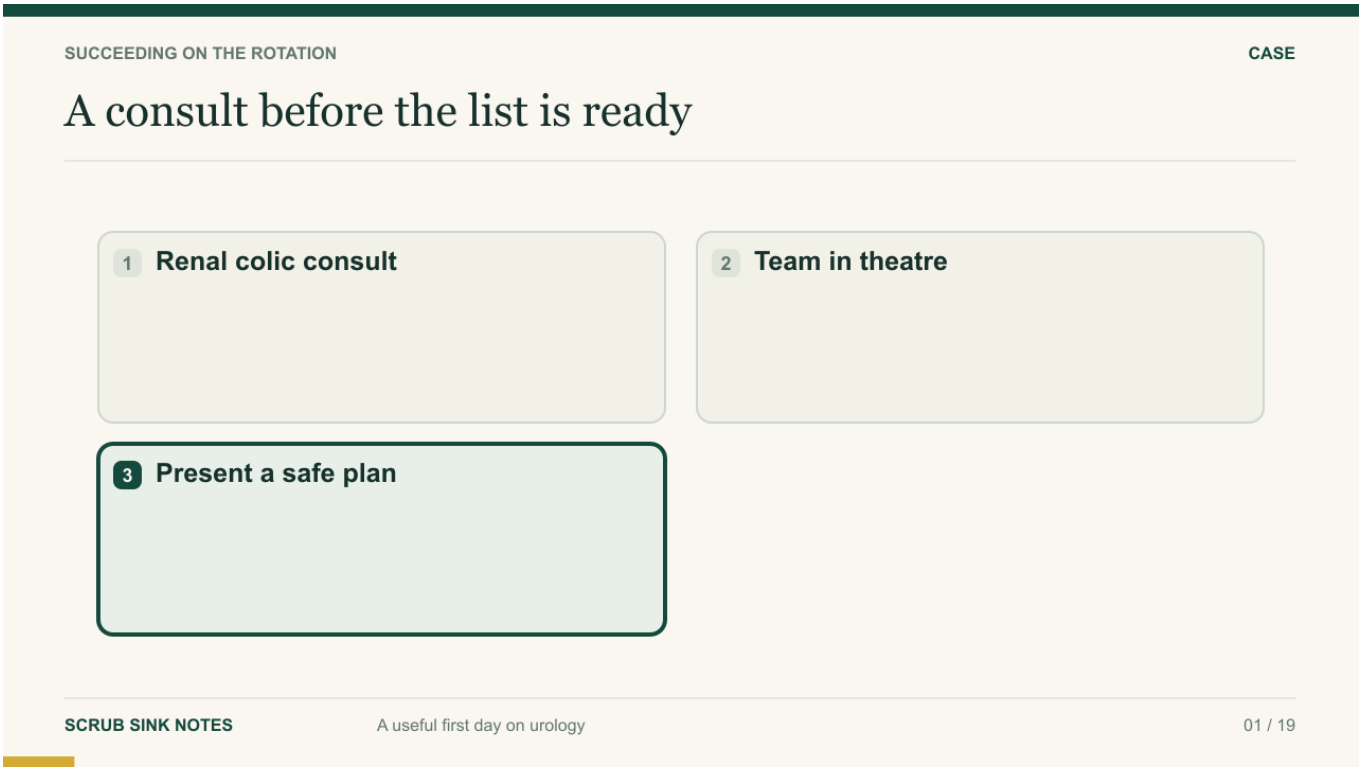
Try this now. A patient with a ureteric stone has fever and an obstructed kidney on imaging. What should lead your call to the resident? Pause. Lead with concern for an infected obstructed system and the patient's stability. The size of the stone matters, but it must not bury the urgent problem.

Change one fact. What would change your next step?

LESSON 02 / TRY THE CASE

A useful first day on urology

A fictional first-day student is asked to assess renal colic while the team is in theatre. The student writes a detailed history but forgets the temperature, kidney function, and scan. The problem is that the resident cannot yet decide whether the patient is safe. Let us build a day around the information that makes action possible.

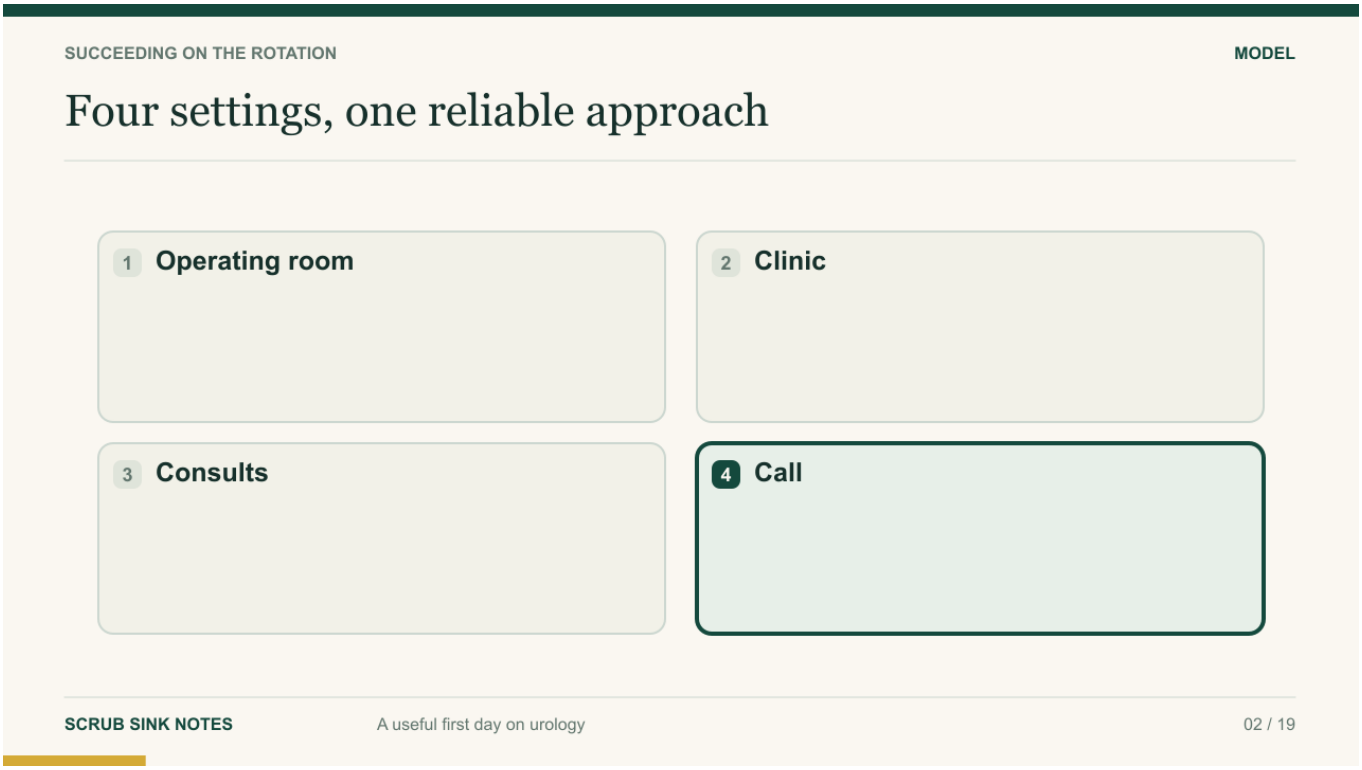


Your first response

What is the central decision? Which fact matters most? State an action and the reason for it.

LESSON 02 / REVIEW AND TRANSFER

A useful first day on urology



The rotation usually moves between the operating room, clinic, consults, and call. The tasks differ, but the approach is consistent. Know where you are expected, understand the patient in front of you, ask what you can safely contribute, and close the loop on work you accept. Confirm the local schedule rather than assuming every service runs alike.

Check the reasoning

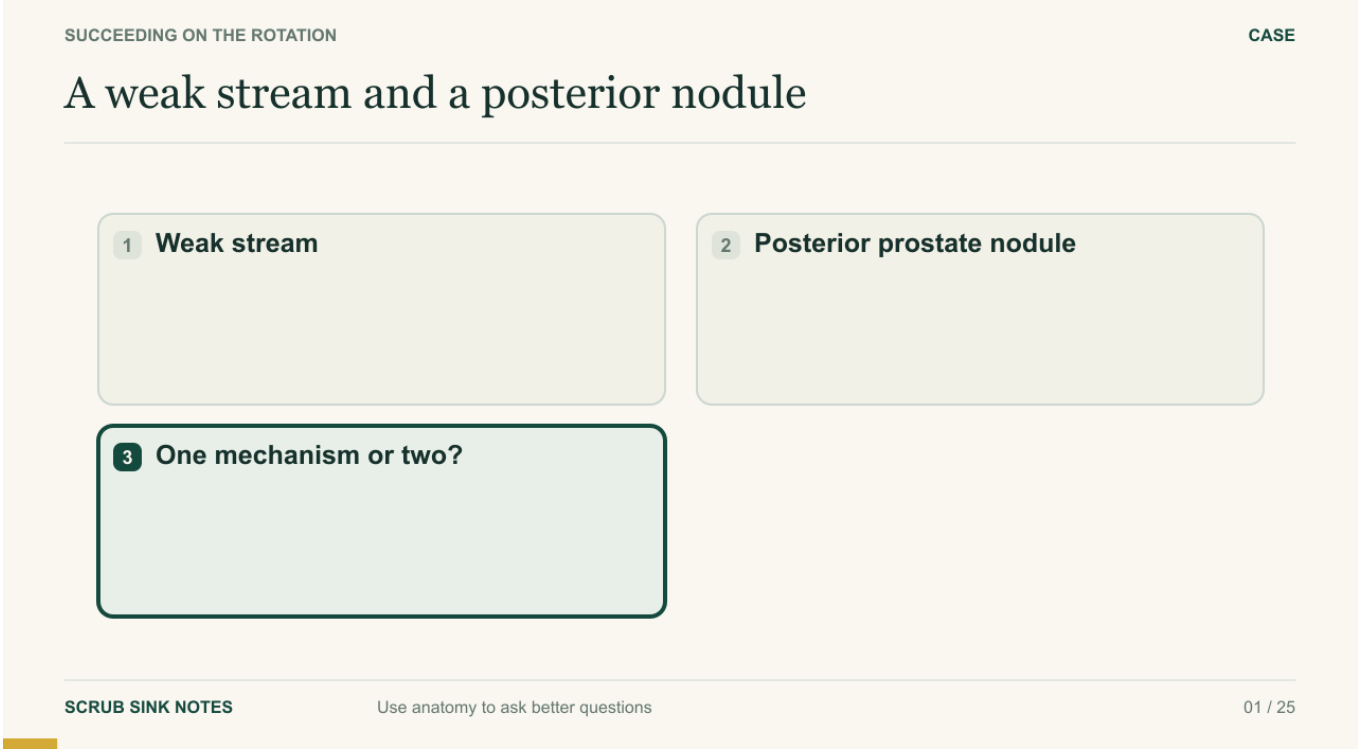
Now the patient develops fever and rigors. What moves into your first sentence? Pause. State concern for infection in an obstructed system, and communicate the current stability. Antibiotics, resuscitation, and urgent source-control assessment now matter. A plan to wait for the stone to pass cannot address that risk.

Change one fact. What would change your next step?

LESSON 03 / TRY THE CASE

Use anatomy to ask better questions

A fictional patient reports a weak stream. Examination also finds a hard area on the back of the prostate. Do those findings have to come from the same process? Keep that question open. A spatial map helps explain why benign enlargement can affect flow while a separate suspicious area needs its own evaluation.



Your first response

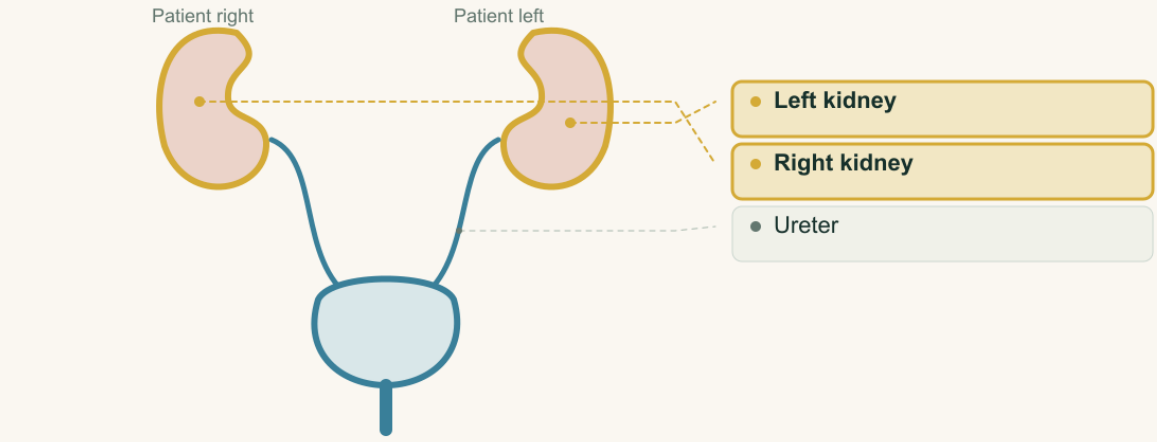
What is the central decision? Which fact matters most? State an action and the reason for it.

LESSON 03 / REVIEW AND TRANSFER

Use anatomy to ask better questions

SUCCEEDING ON THE ROTATION MODEL

Kidneys sit behind the abdominal cavity



Schematic teaching model · not to scale

SCRUB SINK NOTES Use anatomy to ask better questions 02 / 25

The kidneys lie behind the abdominal lining, with the right usually a little lower because of the liver. Urine leaves each renal pelvis through a muscular ureter. This location helps explain flank symptoms, while shared nerve pathways help explain why ureteric pain can travel toward the groin. Pain location suggests a mechanism without proving the diagnosis.

Check the reasoning

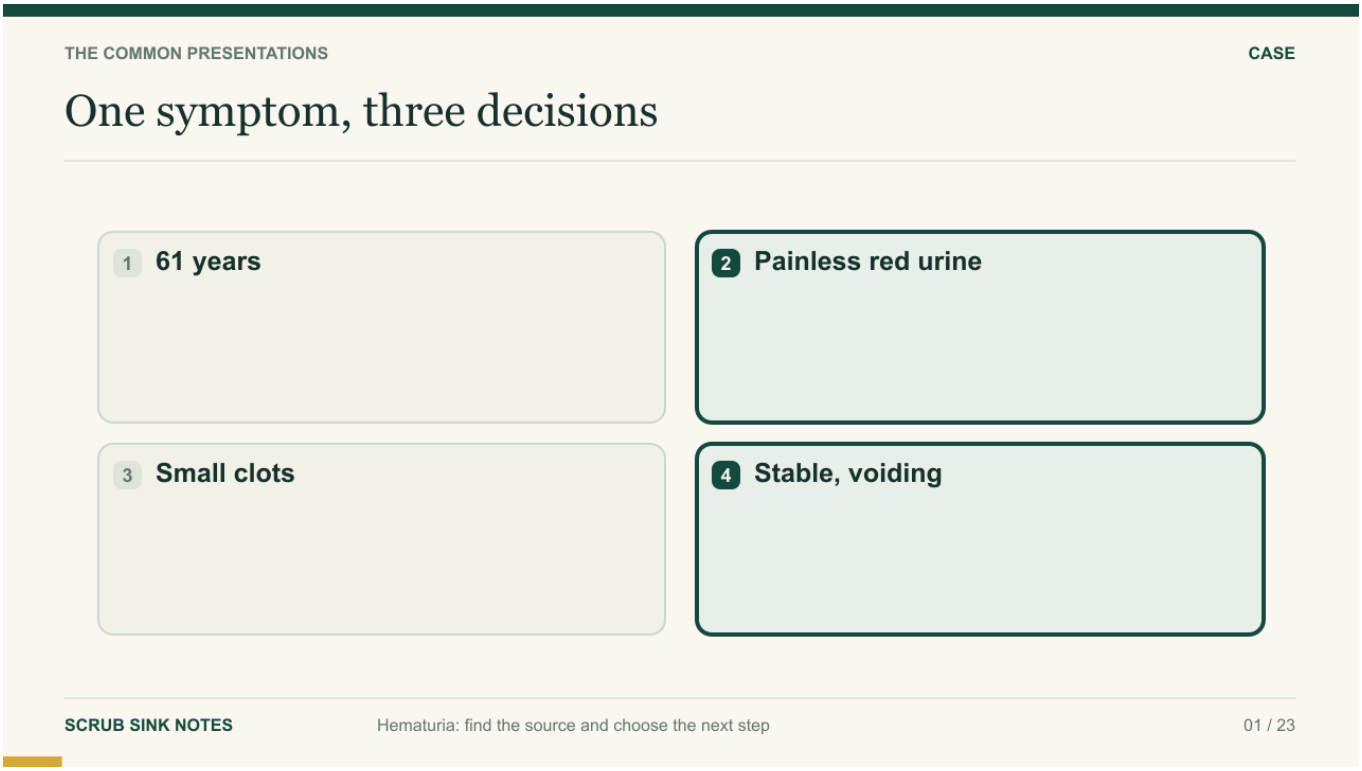
Choose the immediate risks before refining a diagnosis. Fever with an obstructed kidney, sudden severe testicular pain, or retention with saddle sensory changes require urgent escalation. A painful full bladder also needs prompt assessment and drainage planning. Weight loss or bone pain raises a different concern for serious underlying disease. Say which risk you are trying to exclude.

Change one fact. What would change your next step?

LESSON 04 / TRY THE CASE

Hematuria: find the source and choose the next step

A sixty-one-year-old with a smoking history notices red urine and a few small clots. There is no pain, and he can still pass urine. This is a fictional teaching case. Before naming a diagnosis, decide three things. Is he safe now? Is this blood? And what investigation will make the cause less uncertain?

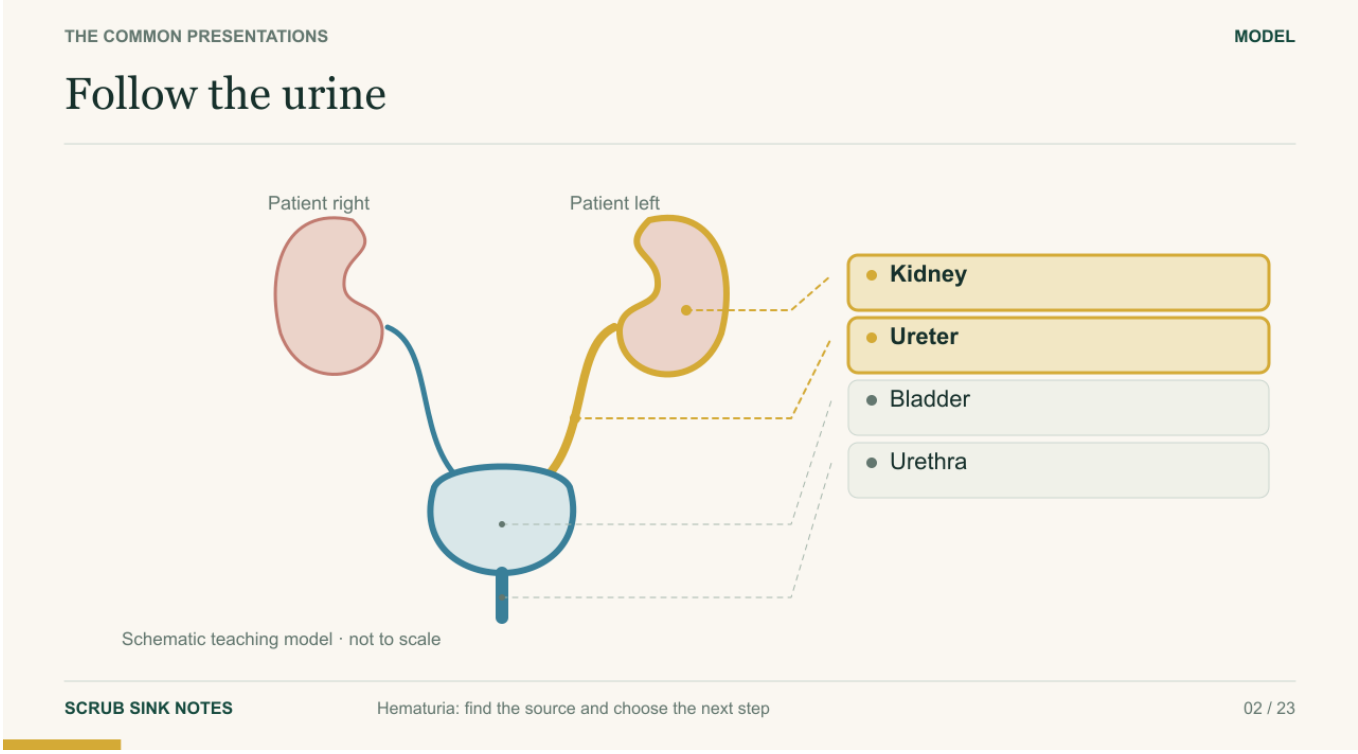


Your first response

What is the central decision? Which fact matters most? State an action and the reason for it.

LESSON 04 / REVIEW AND TRANSFER

Hematuria: find the source and choose the next step



Picture urine moving from the kidney, down a ureter, into the bladder, and out through the urethra. Bleeding can enter anywhere along that route. The kidney filter can also leak red cells into urine before it reaches the drainage system. Those two mechanisms create different clues, but neither the shade of red nor one symptom can locate the source by itself.

Check the reasoning

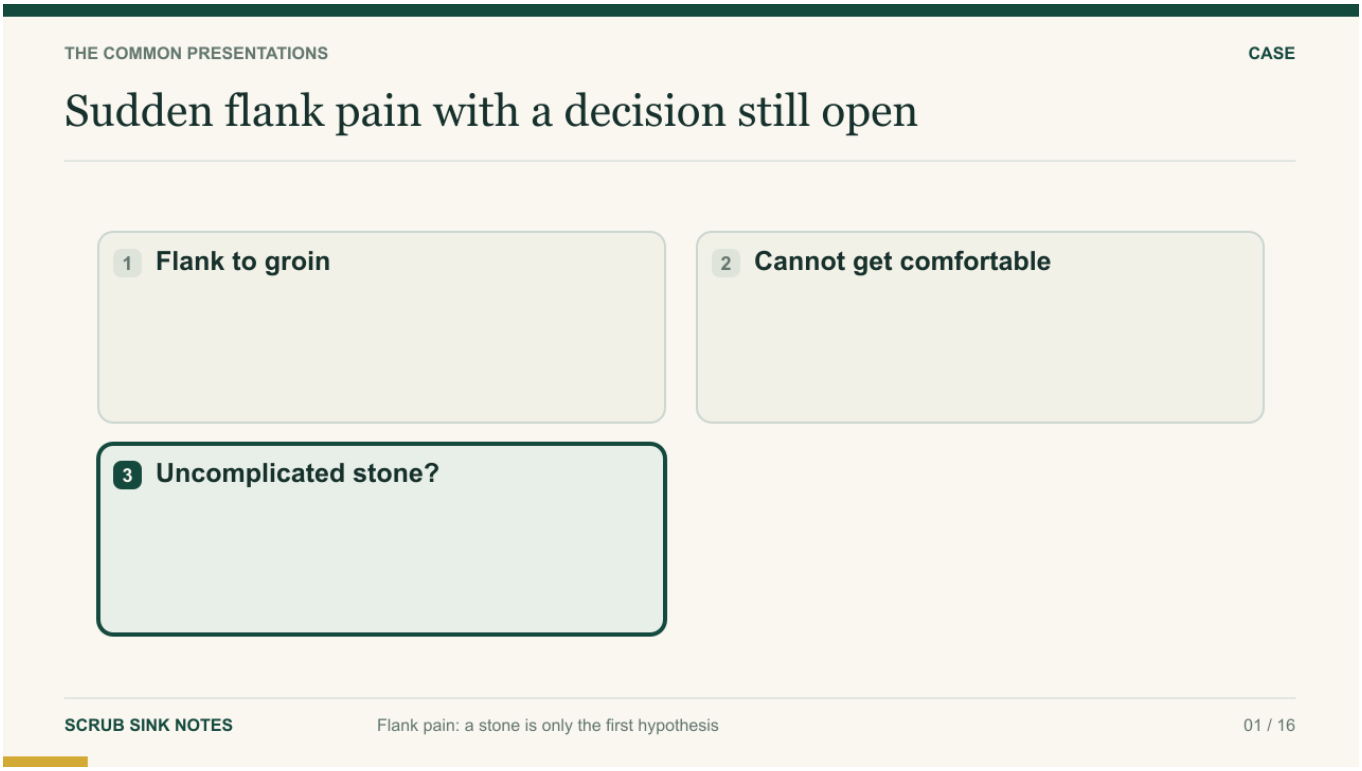
Return to our patient. He is stable, has painless visible blood, and can still empty the bladder. A urine culture is negative. What would you tell him, and what should happen next? Pause and give a two-sentence answer. Include both the possibility you need to exclude and the two anatomical areas the evaluation must address.

Change one fact. What would change your next step?

LESSON 05 / TRY THE CASE

Flank pain: a stone is only the first hypothesis

A fictional patient has sudden flank pain radiating toward the groin and keeps shifting on the bed. A stone is a reasonable first hypothesis. Before treating it as uncomplicated colic, decide whether the patient has infection, threatened kidney function, uncontrolled symptoms, or a dangerous alternative diagnosis. Those questions determine urgency.

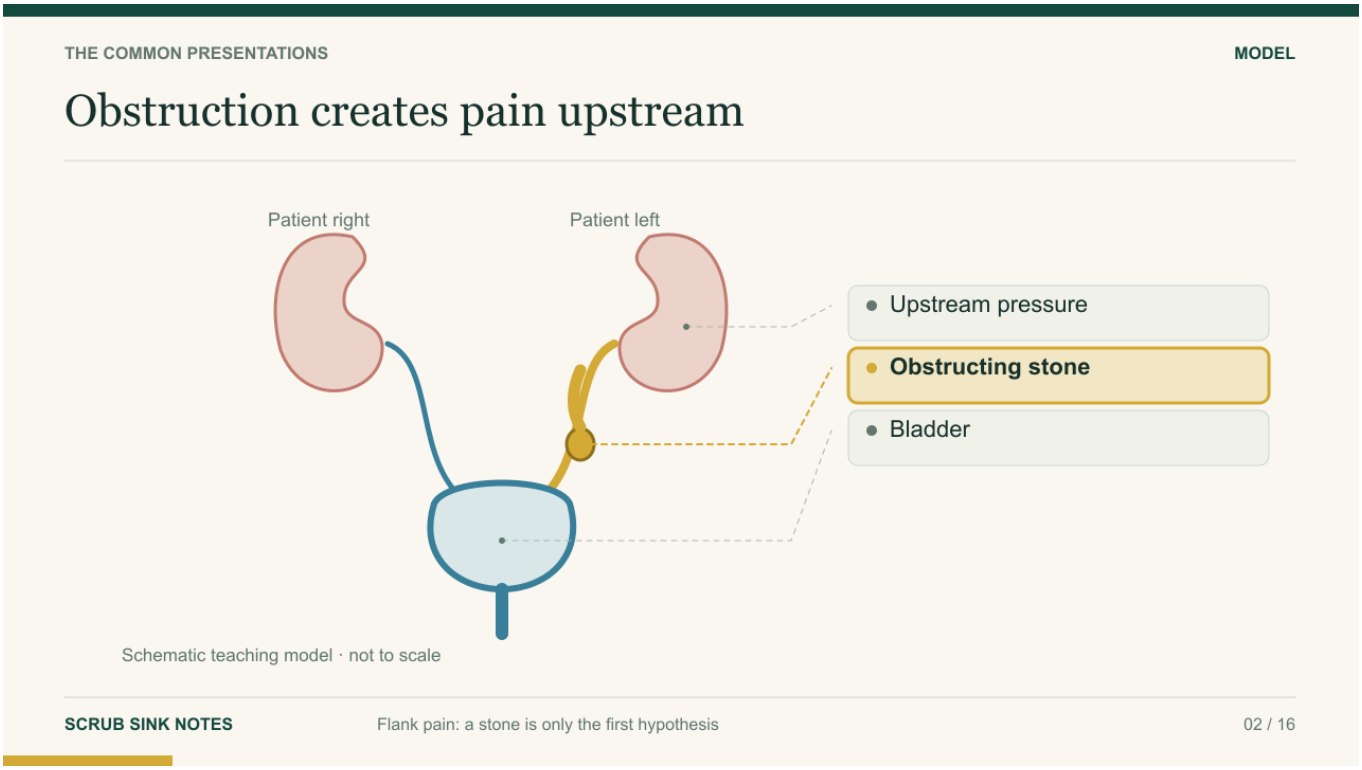


Your first response

What is the central decision? Which fact matters most? State an action and the reason for it.

LESSON 05 / REVIEW AND TRANSFER

Flank pain: a stone is only the first hypothesis



A ureter contracts around an obstructing stone while pressure rises upstream. Distension, smooth-muscle activity, and inflammation contribute to the pain. Shared nerve pathways allow the pain to radiate. A distal stone can also irritate the region near the bladder and cause urgency. Neither the radiation nor the restlessness proves that a stone is the only explanation.

Check the reasoning

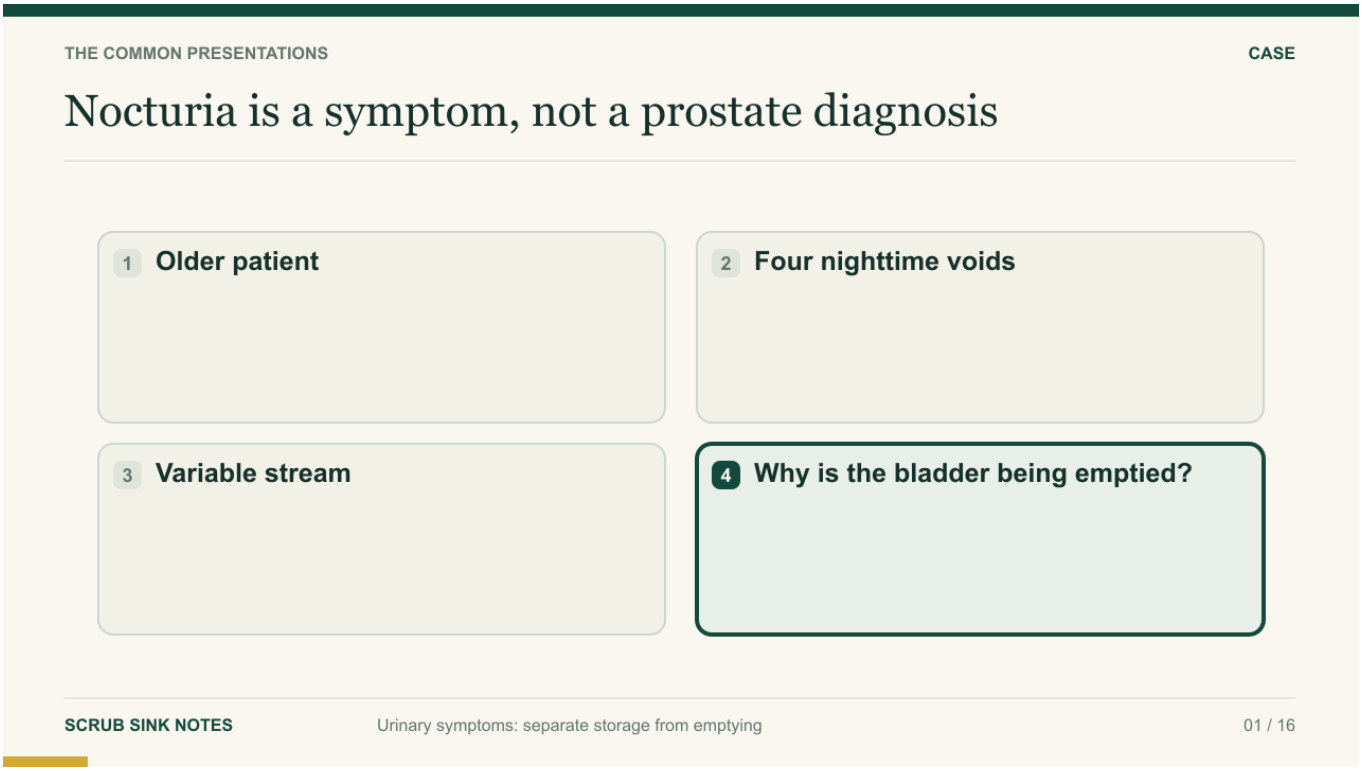
Return to the first patient. Imaging shows a small distal stone. Pain is controlled and kidney function is preserved. What else must be true before an outpatient plan makes sense? Pause. Review infection risk, oral intake, urine output, the other kidney, reliable follow-up, and clear return instructions. Confirm the plan with the supervising clinician.

Change one fact. What would change your next step?

LESSON 06 / TRY THE CASE

Urinary symptoms: separate storage from emptying

A fictional patient wakes four times each night to pass urine and assumes the prostate must need surgery. Before agreeing, ask whether the bladder is filling too quickly, storing poorly, or emptying incompletely. Several mechanisms can produce the same complaint, and treatment works best when it addresses the mechanism that is actually present.

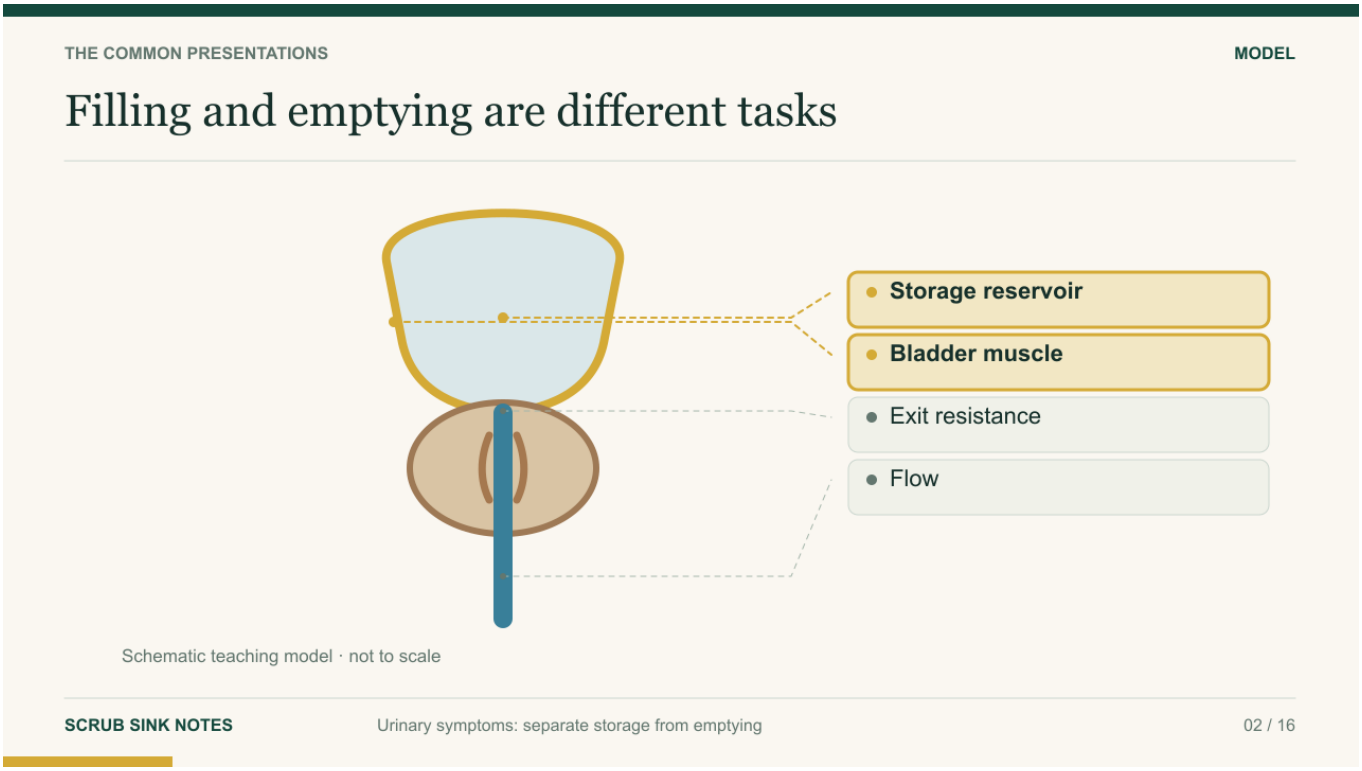


Your first response

What is the central decision? Which fact matters most? State an action and the reason for it.

LESSON 06 / REVIEW AND TRANSFER

Urinary symptoms: separate storage from emptying



A bladder must store a useful volume comfortably and then empty against an outlet. Urgency, frequency, nocturia, and urgency leakage describe storage. Hesitancy, straining, intermittency, and a weak stream describe voiding. A sense of incomplete emptying and post-void dribble add information afterward. Mixed symptoms are common, so ask about each phase rather than forcing one label.

Check the reasoning

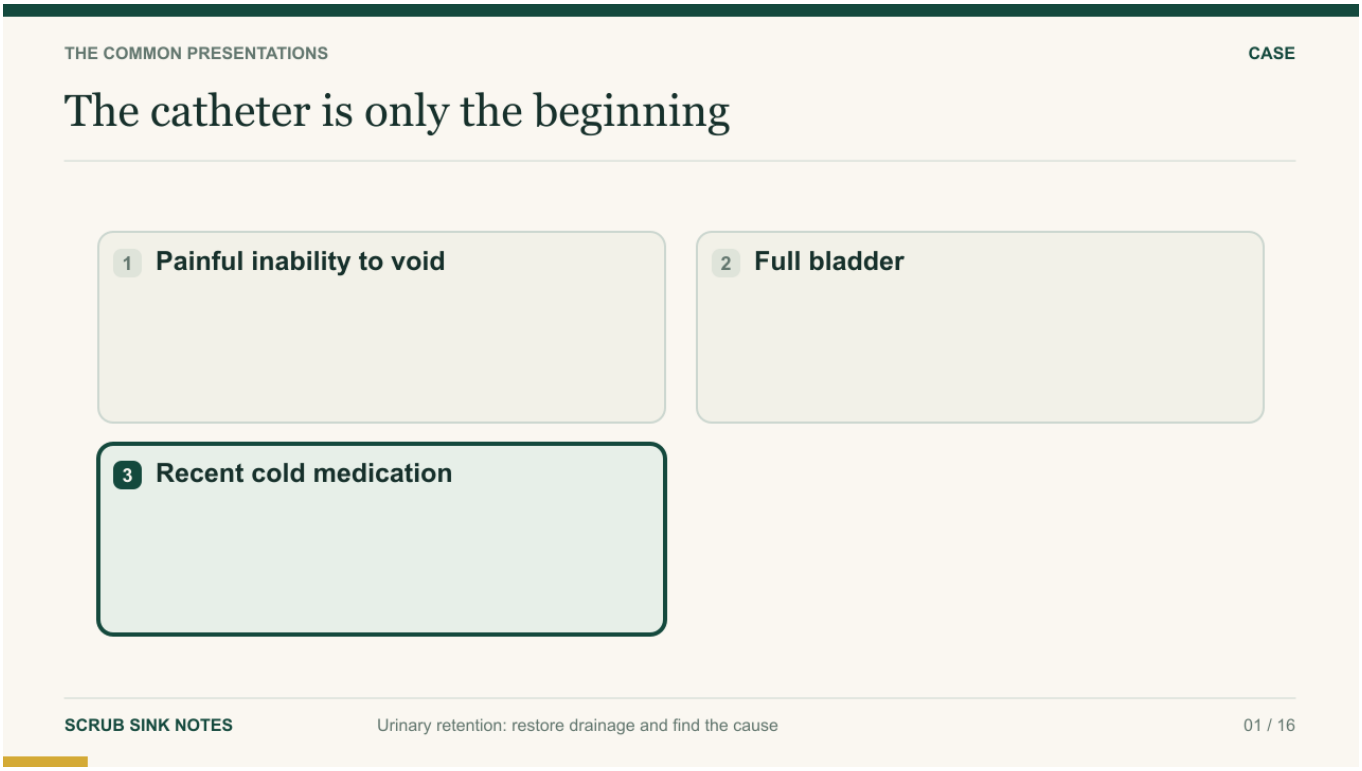
Return to our patient. A diary shows large nighttime urine volumes and the residual is small. Why is prostate surgery not the first conclusion? Pause. An outlet operation does not directly correct excess nighttime urine production or a sleep-related driver. Discuss the production pattern and contributors, while still evaluating any separate voiding problem.

Change one fact. What would change your next step?

LESSON 07 / TRY THE CASE

Urinary retention: restore drainage and find the cause

A fictional patient develops painful inability to pass urine after taking a cold medication. A scan shows a full bladder. Relief of the obstruction matters immediately, but the consult does not end when urine appears. You still need to understand the trigger, assess kidney and neurologic risk, and choose safe monitoring and follow-up.



Your first response

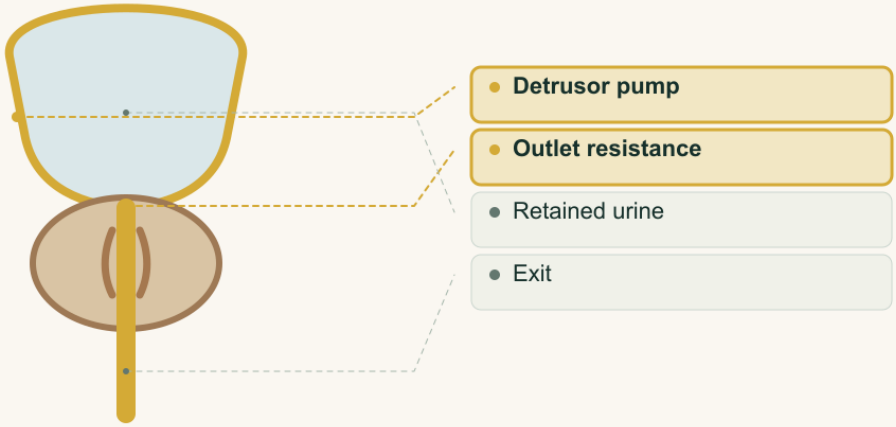
What is the central decision? Which fact matters most? State an action and the reason for it.

LESSON 07 / REVIEW AND TRANSFER

Urinary retention: restore drainage and find the cause

THE COMMON PRESENTATIONS MODEL

An emptying system has a pump and an exit



Schematic teaching model · not to scale

Voiding requires adequate bladder contraction, a patent outlet, and coordinated nerve signals. Retention can result from excessive outlet resistance, weak contraction, disturbed coordination, or a combination. This explains why a prostate, a medication, and a neurologic lesion can produce a similar full bladder. The anatomy organizes the causes rather than supplying a single diagnosis.

Check the reasoning

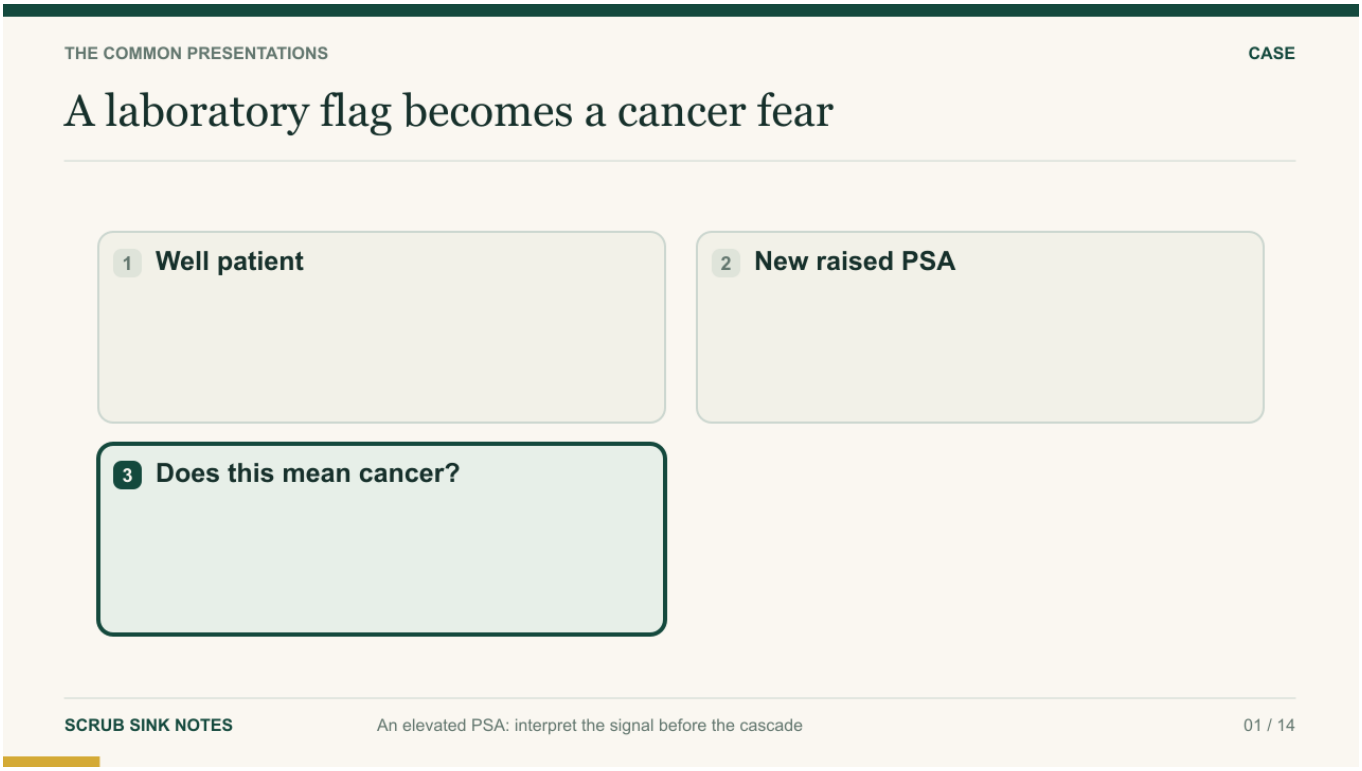
Return to our patient. Pain improves after drainage, but a large initial volume is followed by continued high urine output. What matters now? Pause. Reassess volume status, kidney function, electrolytes, and the need for monitored care. The symptom has improved, but the post-obstruction physiology may still make immediate discharge unsafe.

Change one fact. What would change your next step?

LESSON 08 / TRY THE CASE

An elevated PSA: interpret the signal before the cascade

A fictional patient sees an abnormal prostate-specific antigen result online and asks whether cancer is certain. Your answer should reduce confusion without giving false reassurance. The result is a signal from prostate tissue. It needs confirmation and risk assessment before it becomes a decision about imaging, biopsy, or treatment.

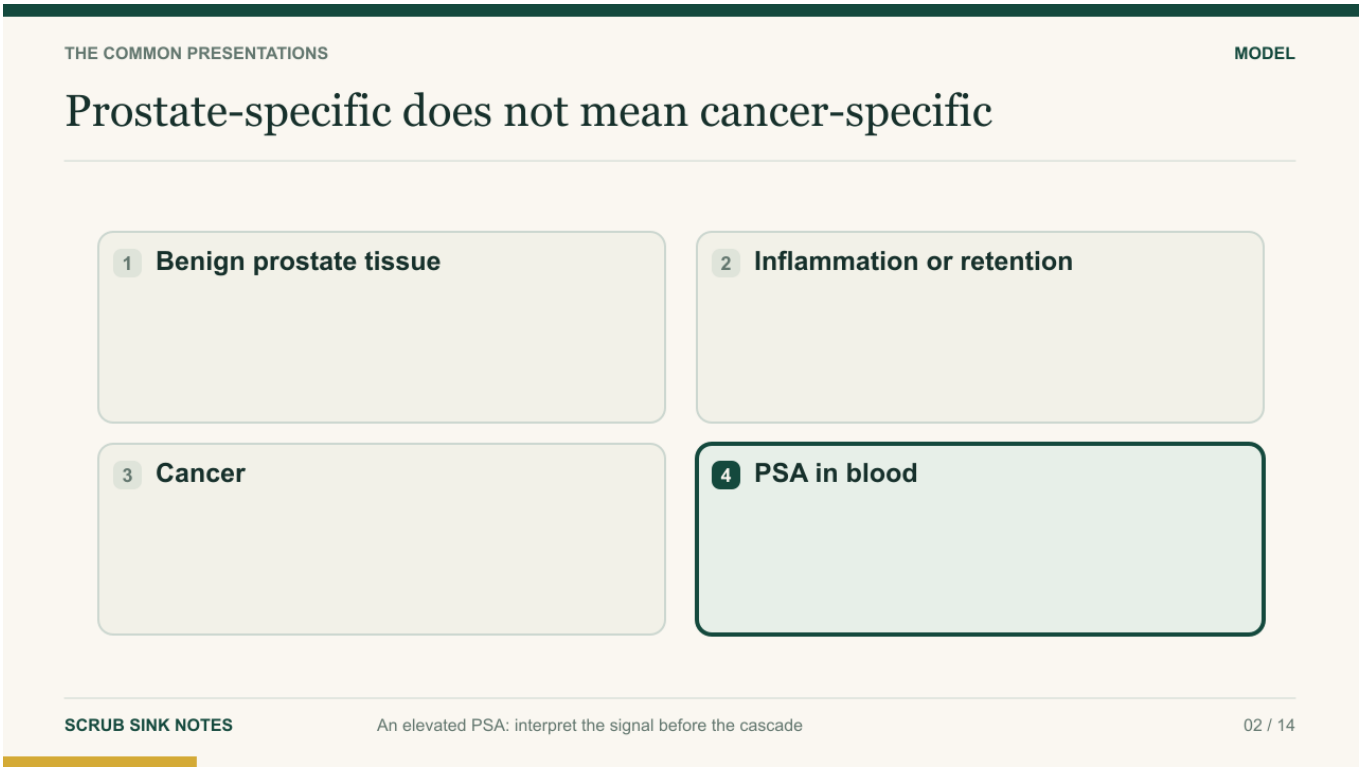


Your first response

What is the central decision? Which fact matters most? State an action and the reason for it.

LESSON 08 / REVIEW AND TRANSFER

An elevated PSA: interpret the signal before the cascade



Prostate cells produce prostate-specific antigen, a protein involved in semen liquefaction. Benign enlargement, inflammation, retention, and cancer can all influence its blood level. There is no single line that separates every benign result from every cancer. The task is to estimate the risk of clinically important cancer in this patient.

Check the reasoning

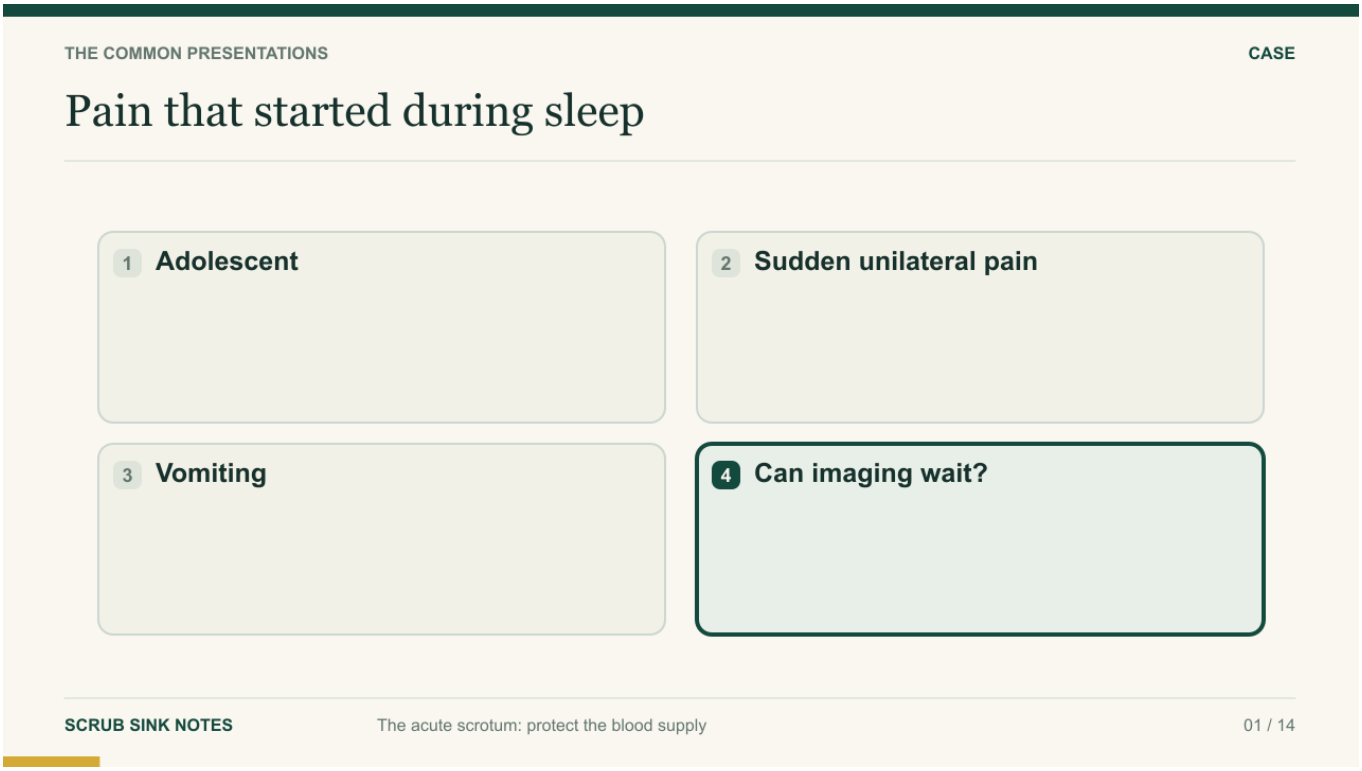
Return to the original patient. Give a clear answer to, Does this mean cancer, and Do I need a biopsy today? Pause. Explain that benign causes can raise the result, arrange appropriate confirmation, and discuss risk assessment if it remains concerning. A written next step is more reassuring than the unsupported promise that everything is fine.

Change one fact. What would change your next step?

LESSON 09 / TRY THE CASE

The acute scrotum: protect the blood supply

A fictional adolescent wakes with severe one-sided scrotal pain and vomiting. There is no history of trauma. The immediate question is whether the testis has twisted on its cord. Begin urgent assessment and contact the surgical team early. A careful differential matters, but it must not consume the time needed to protect blood supply.



Your first response

What is the central decision? Which fact matters most? State an action and the reason for it.

LESSON 09 / REVIEW AND TRANSFER

The acute scrotum: protect the blood supply



The cord contains vessels as well as the sperm duct. Twisting can first impair venous drainage, causing congestion and swelling, and then compromise arterial inflow. Tissue ischemia develops as oxygen delivery fails. The severity depends on how tightly and how long the cord has twisted. That is why delay matters even when the outside of the scrotum looks unimpressive.

Check the reasoning

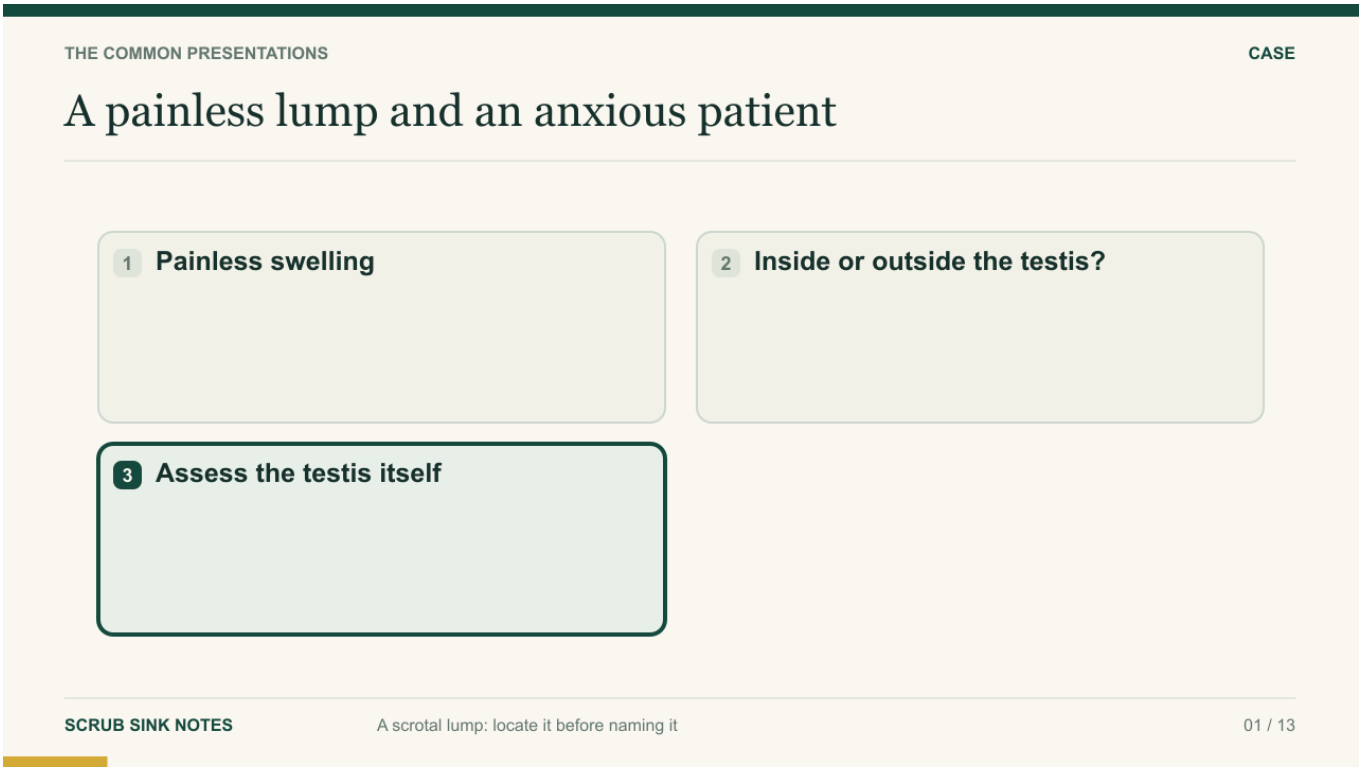
Return to the adolescent. A cremasteric reflex is present, and someone suggests sending the patient home. What would you say? Pause. A present reflex cannot safely dismiss a strongly concerning history. Continue urgent senior and urologic assessment, with imaging only through a pathway that does not delay definitive care when suspicion is high.

Change one fact. What would change your next step?

LESSON 10 / TRY THE CASE

A scrotal lump: locate it before naming it

A fictional patient notices a painless scrotal lump. The absence of pain does not tell you whether it is benign. Start by locating the abnormality relative to the testis, then decide what examination and imaging can establish. This approach is more reliable than choosing a diagnosis from the patient's age or the word lump.



Your first response

What is the central decision? Which fact matters most? State an action and the reason for it.

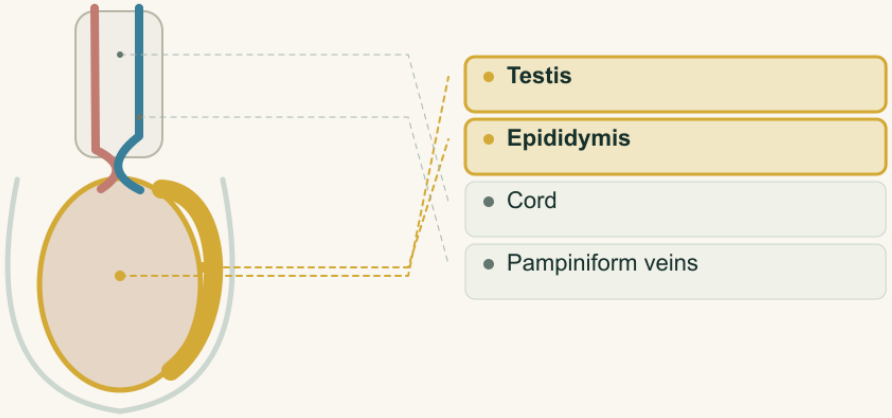
LESSON 10 / REVIEW AND TRANSFER

A scrotal lump: locate it before naming it

THE COMMON PRESENTATIONS

MODEL

The neighboring structures explain common lumps



Schematic teaching model · not to scale

Feel the testis as a distinct organ, the epididymis behind it, and the cord above. A cyst in the epididymis can feel separate from a normal testis. A varicocele belongs to the venous plexus. A hydrocele surrounds the testis with fluid. These spatial relationships do much of the diagnostic work before a disease name is chosen.

Check the reasoning

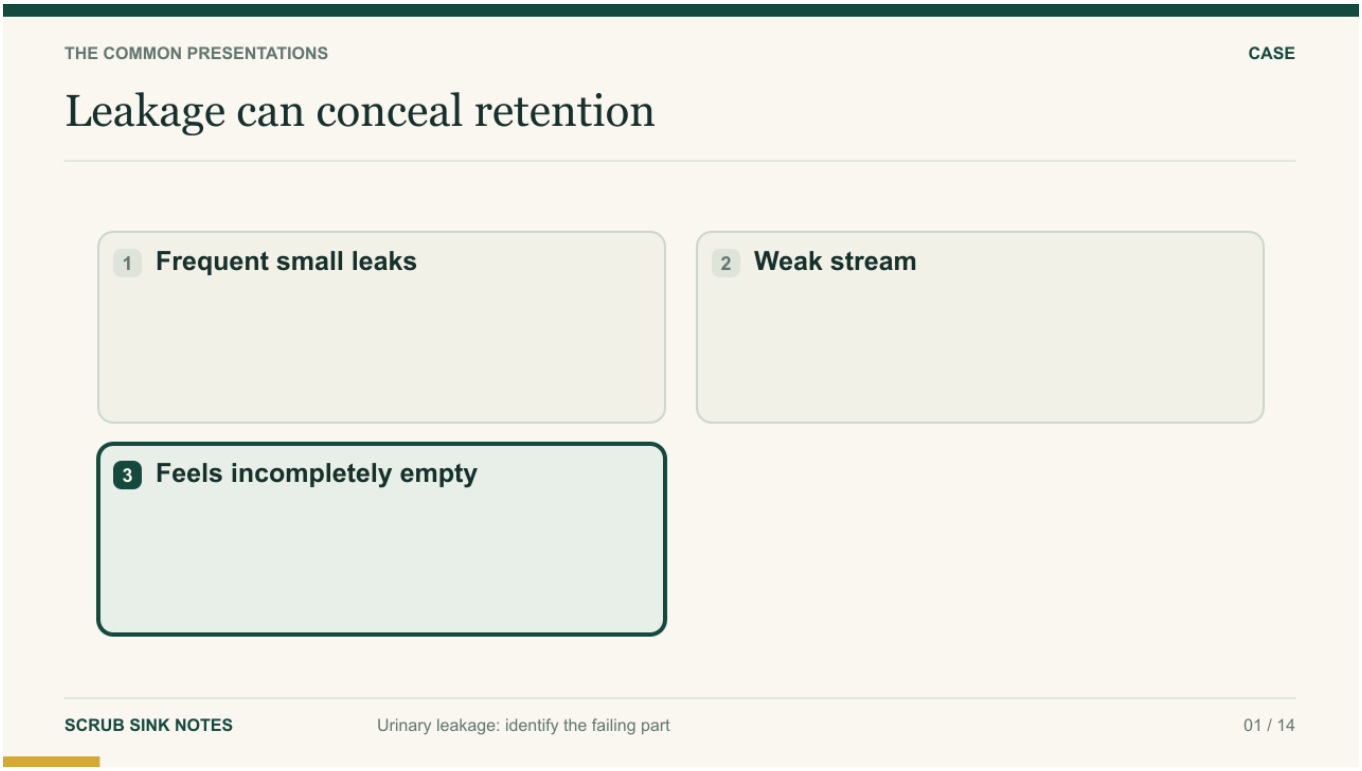
Return to a fictional patient whose swelling transilluminates, but you cannot feel the testis behind it. What is still unknown? Pause. You have evidence of fluid, not proof of a normal testis. Ultrasound can establish the underlying anatomy before you explain observation or elective treatment for a symptomatic hydrocele.

Change one fact. What would change your next step?

LESSON 11 / TRY THE CASE

Urinary leakage: identify the failing part

A fictional patient asks for medication to stop frequent small urinary leaks. The stream is weak and the bladder never feels empty. Before assuming an overactive bladder, ask whether urine is leaking from an overfilled reservoir. The treatments for these mechanisms can move the bladder in opposite directions.

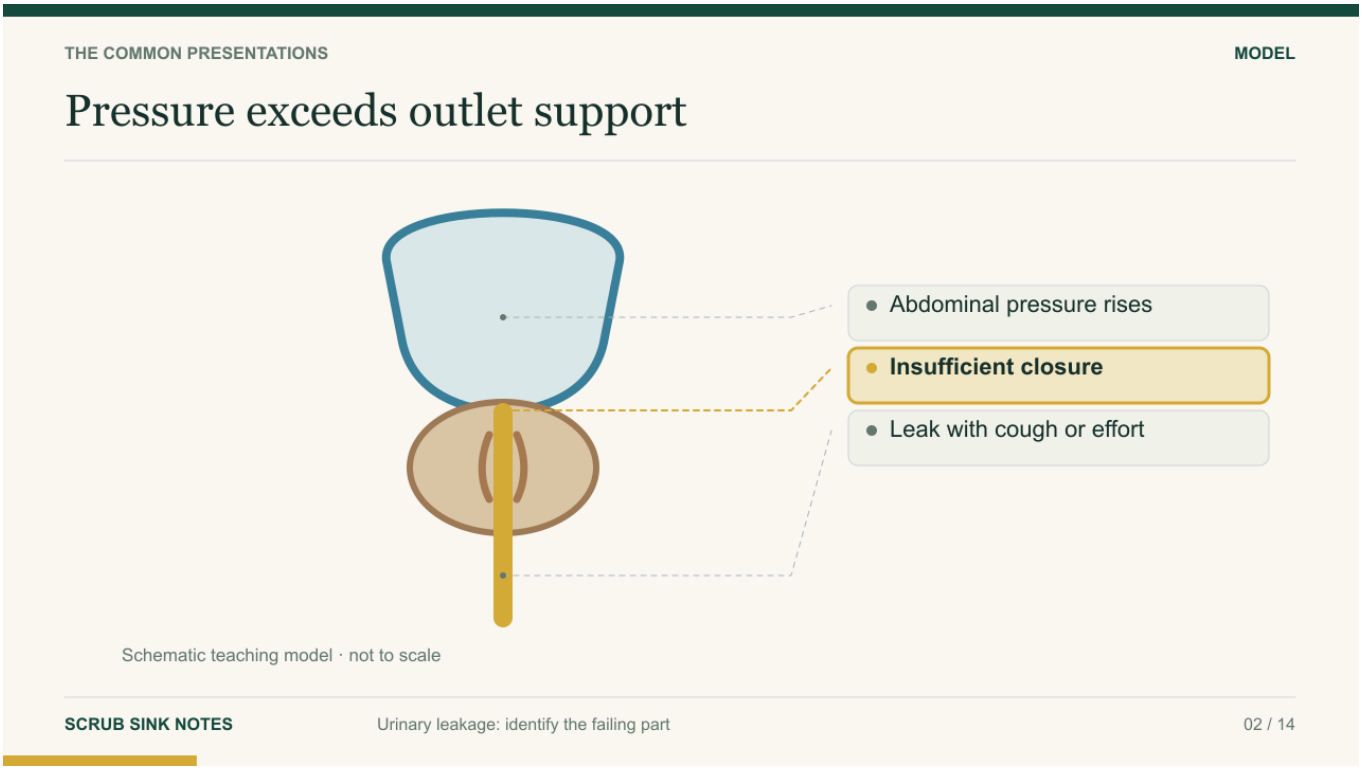


Your first response

What is the central decision? Which fact matters most? State an action and the reason for it.

LESSON 11 / REVIEW AND TRANSFER

Urinary leakage: identify the failing part



Stress leakage occurs when an increase in abdominal pressure exceeds outlet closure and support. Coughing, lifting, laughing, or exercise may trigger it. It can follow pelvic floor injury or prostate surgery, among other causes. Ask about the trigger and, when appropriate, assess observed leakage during a supervised examination with a comfortably full bladder.

Check the reasoning

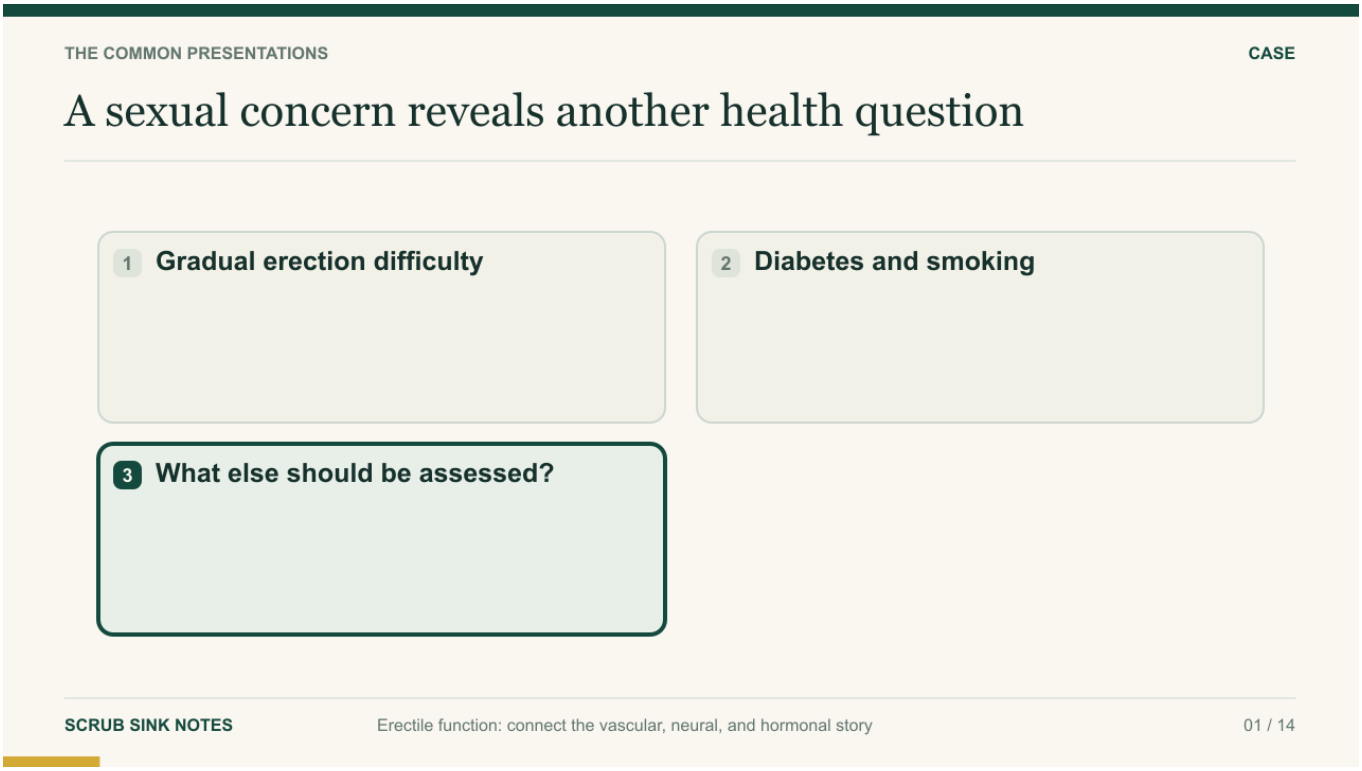
Return to our patient. The residual is large. Would simply suppressing urgency solve the emptying problem? Pause. It may worsen it. Discuss the cause of incomplete emptying and a drainage plan, while checking kidney, infection, and neurologic risk. Once emptying is safe, reassess which leakage symptoms remain and which treatment fits them.

Change one fact. What would change your next step?

LESSON 12 / TRY THE CASE

Erectile function: connect the vascular, neural, and hormonal story

A fictional patient reports gradually worsening erections and has diabetes and a smoking history. The conversation is about sexual function, but it is also an opportunity to assess vascular health and the patient's broader concerns. First establish what the patient means. Difficulty with erection is different from low desire, pain, or difficulty with ejaculation.

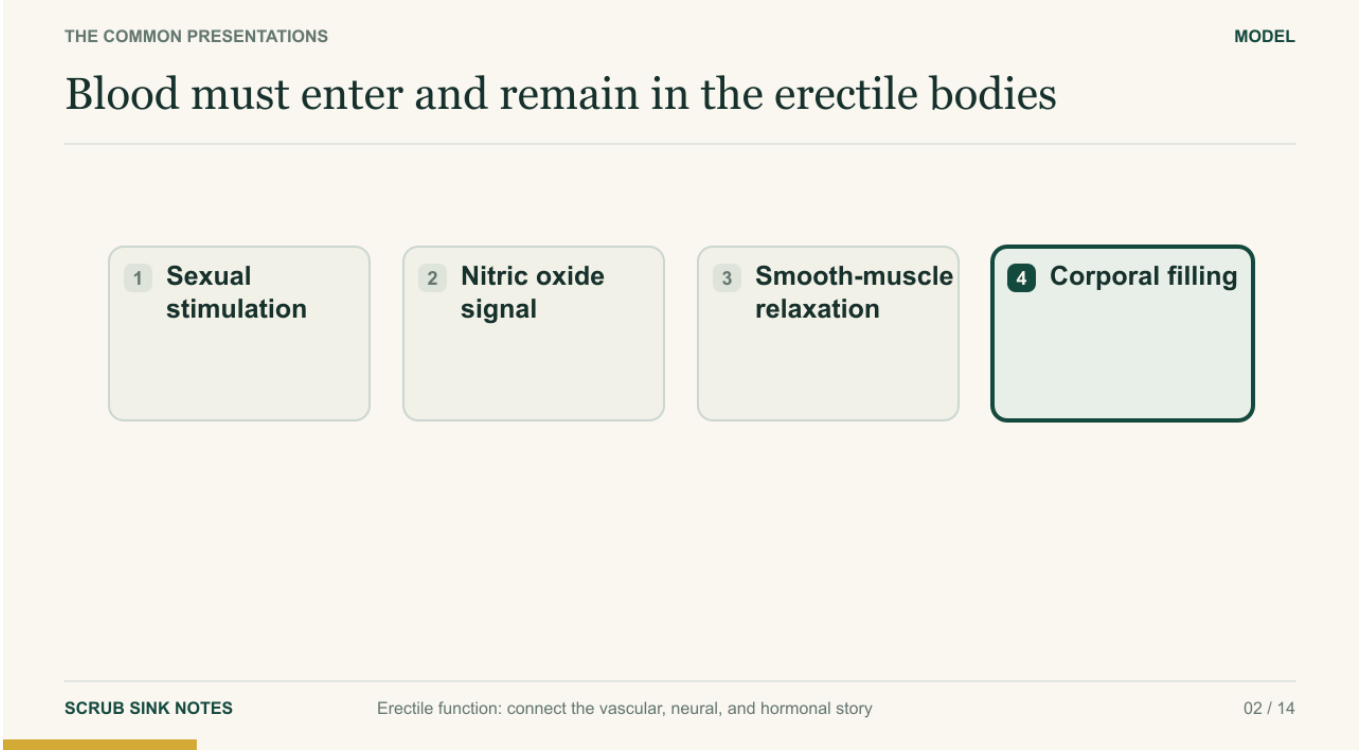


Your first response

What is the central decision? Which fact matters most? State an action and the reason for it.

LESSON 12 / REVIEW AND TRANSFER

Erectile function: connect the vascular, neural, and hormonal story



Sexual stimulation triggers neural signals and nitric oxide release. A downstream messenger promotes smooth-muscle relaxation, allowing blood to fill the erectile bodies. Expansion helps limit venous outflow and support rigidity. Vascular disease, nerve injury, medication effects, hormones, and psychological factors can disturb different parts of the process. More than one contributor is common.

Check the reasoning

Return to a fictional follow-up. The patient took an erection tablet without stimulation and expected an automatic response. What should be reviewed before calling the treatment a failure? Pause. Explain the mechanism, appropriate use, timing, interactions, and the patient's goals. Then reassess the physical and psychological contributors and discuss alternatives if the trial remains unsuccessful.

Change one fact. What would change your next step?

LESSON 13 / TRY THE CASE

Male infertility: production, transport, and the couple

A fictional couple is trying to conceive. A semen sample reports no sperm, and the male partner uses testosterone obtained for low energy. Before predicting the future, distinguish a production problem, a transport problem, and a collection or testing problem. Evaluate both partners in parallel, because timing and choices depend on the couple's situation.

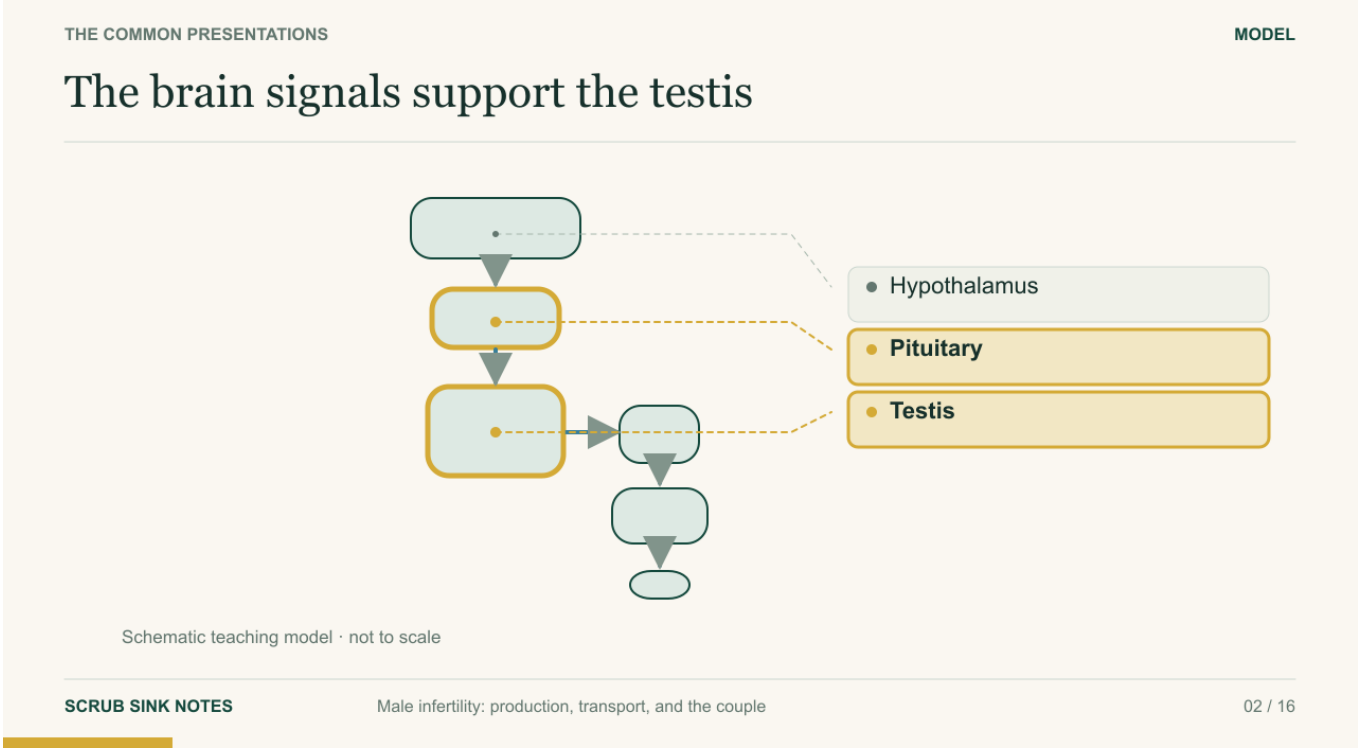


Your first response

What is the central decision? Which fact matters most? State an action and the reason for it.

LESSON 13 / REVIEW AND TRANSFER

Male infertility: production, transport, and the couple



The hypothalamus signals the pituitary, which releases luteinizing hormone and follicle-stimulating hormone. These support testosterone production and the cells that nurture developing sperm. Sperm production and maturation take months, so fever, illness, drugs, or improvement may affect a semen result well after the original event. A laboratory snapshot needs a timeline.

Check the reasoning

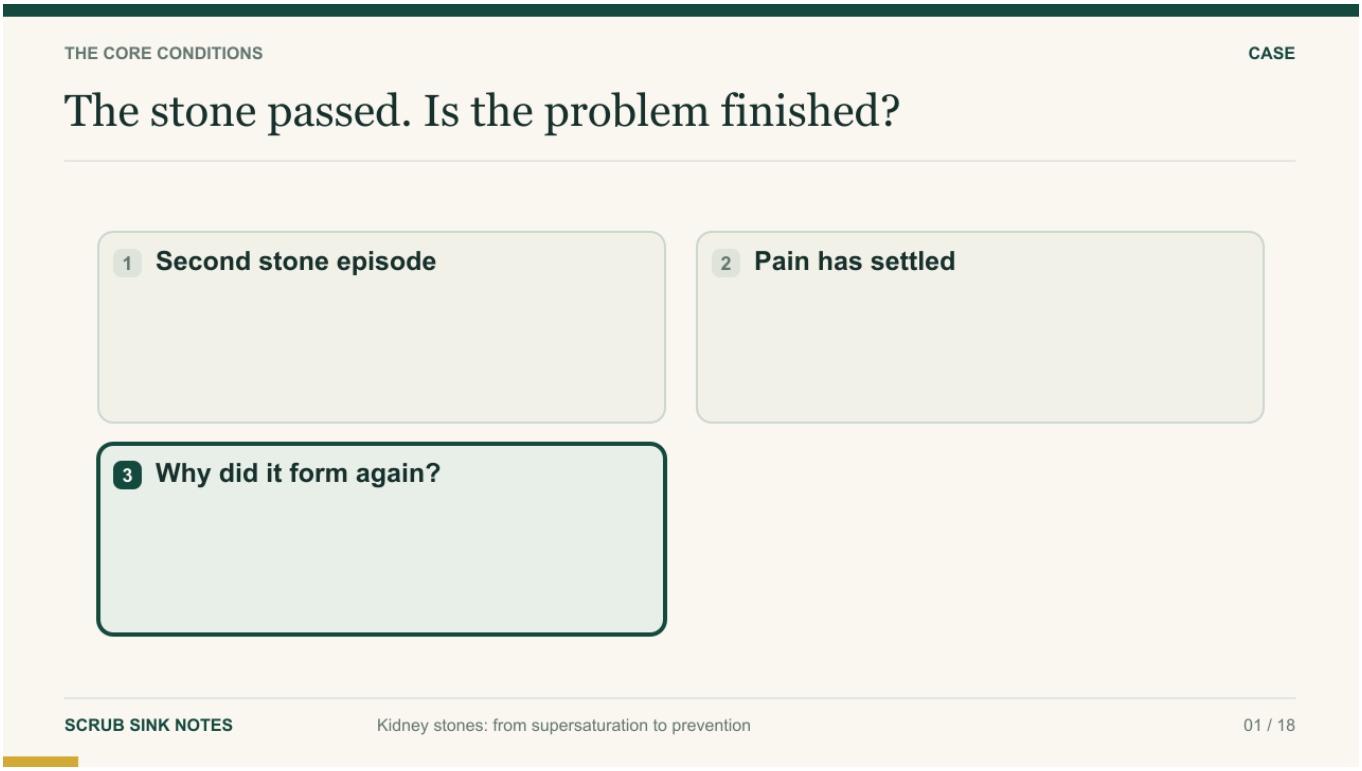
Return to our patient using testosterone. Would a higher dose improve the absent sperm count? Pause. It could further suppress the signals required for production. Arrange specialist review of the medication and fertility goals, confirm the semen findings, and assess both partners. Discuss that recovery can take months and that the timeline is individual.

Change one fact. What would change your next step?

LESSON 14 / TRY THE CASE

Kidney stones: from supersaturation to prevention

A fictional patient passes a second stone and feels well. Relief is welcome, but recurrence raises a new question: what about the urine allowed crystals to persist and grow? Stone care has an acute phase, a treatment decision about existing stones, and a prevention plan. Completing only the first phase leaves the recurring problem unexplained.

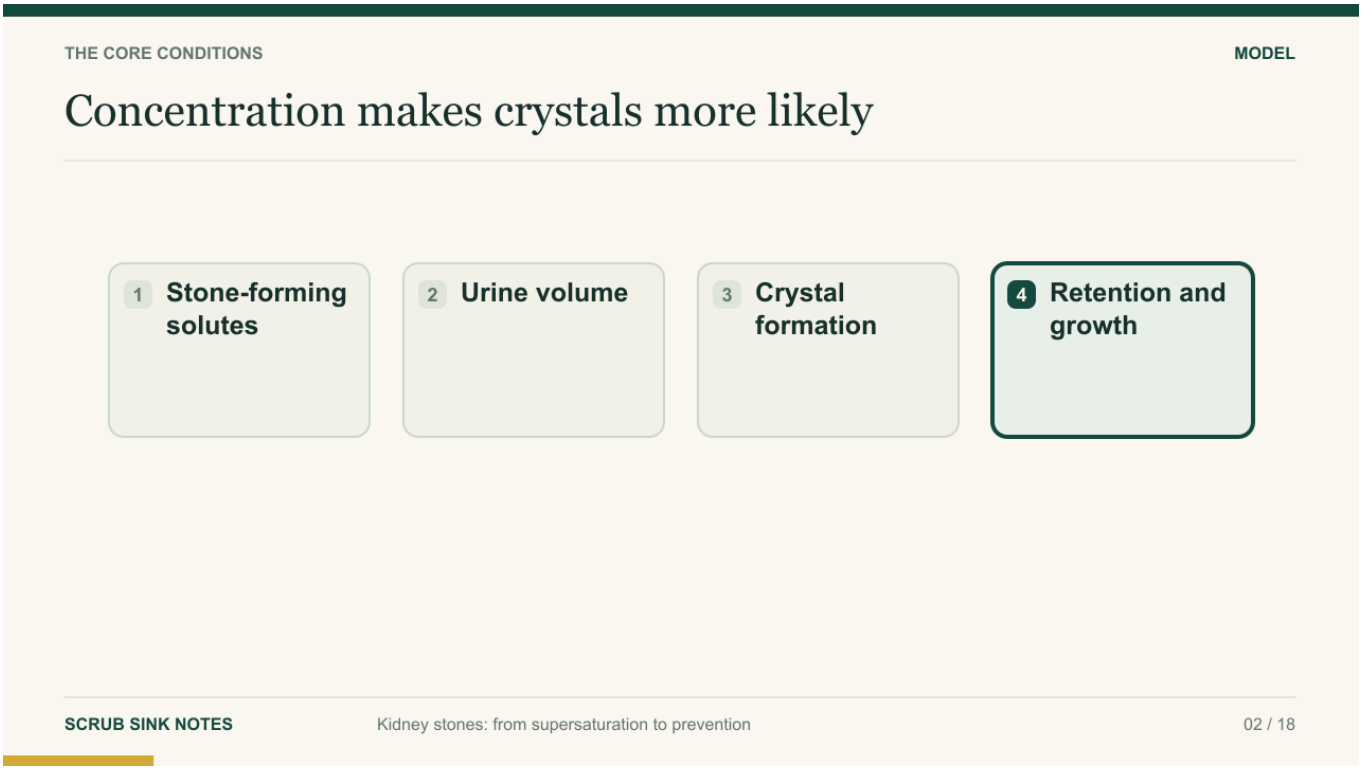


Your first response

What is the central decision? Which fact matters most? State an action and the reason for it.

LESSON 14 / REVIEW AND TRANSFER

Kidney stones: from supersaturation to prevention



A stone forms when the urinary environment favors crystallization and crystals persist long enough to grow. Low volume concentrates solutes. Acidity, calcium, oxalate, citrate, infection, and inherited handling of particular substances alter the balance. This is why stone analysis and urine chemistry can lead to different preventive treatments for people with the same painful presentation.

Check the reasoning

Return to our recurrent stone former. The stone contains calcium oxalate, so the patient stopped all dietary calcium. Why might that backfire? Pause. Less calcium in the gut can leave more oxalate available for absorption and urinary excretion. Discuss normal dietary calcium, sodium, fluid goals, and the individual metabolic pattern rather than equating stone calcium with dietary excess.

Change one fact. What would change your next step?

LESSON 15 / TRY THE CASE

Urinary infection: treat the syndrome, not the culture

A fictional patient with a long-term catheter has cloudy urine and a positive culture, but no new urinary or systemic symptoms. Someone requests antibiotics for the report. First decide whether there is an infection syndrome to treat. A laboratory can detect bacteria without establishing that those bacteria are causing the patient's current illness.

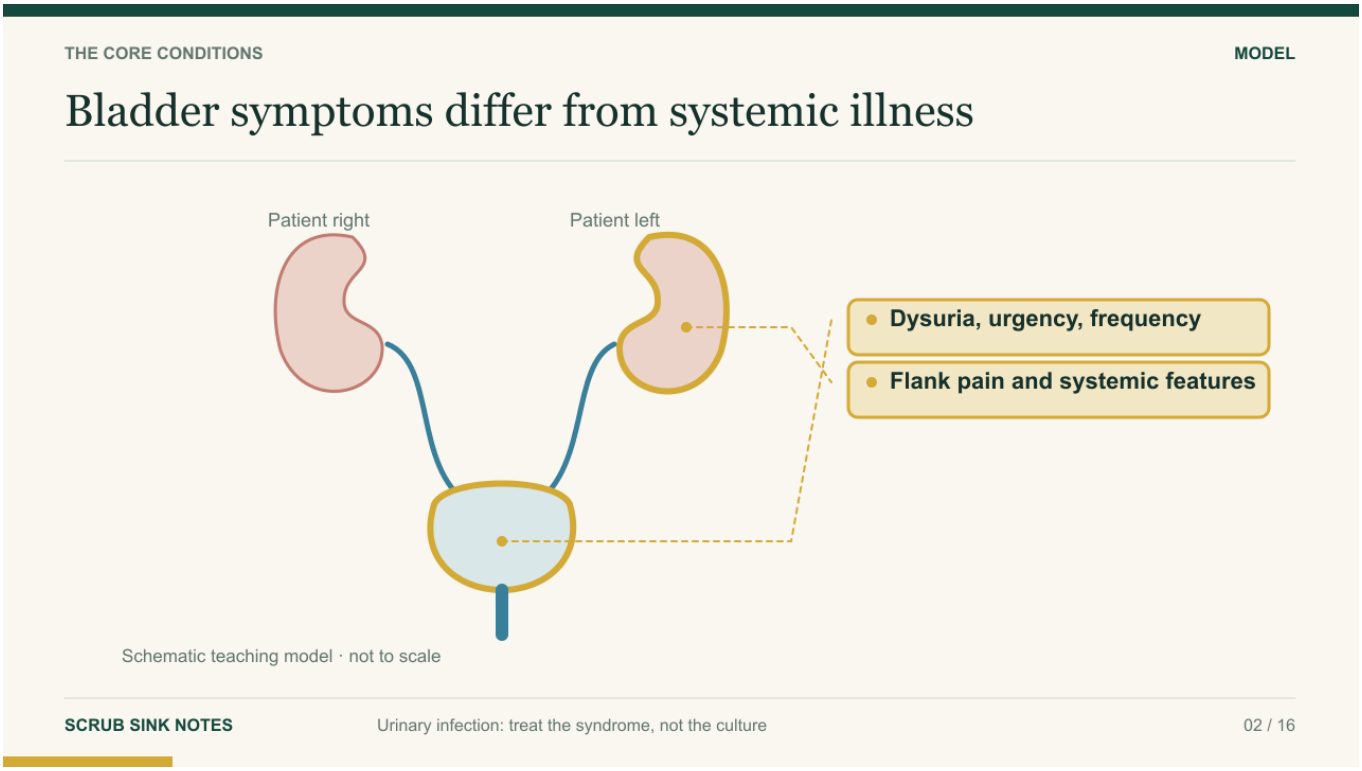


Your first response

What is the central decision? Which fact matters most? State an action and the reason for it.

LESSON 15 / REVIEW AND TRANSFER

Urinary infection: treat the syndrome, not the culture



Localized bladder symptoms include dysuria, frequency, urgency, and suprapubic discomfort. Fever, rigors, flank pain, or systemic illness raise concern for infection beyond a simple bladder syndrome. Not every patient has every feature, and vulnerable patients may present atypically. Localize the syndrome and assess severity before choosing a drug or a duration.

Check the reasoning

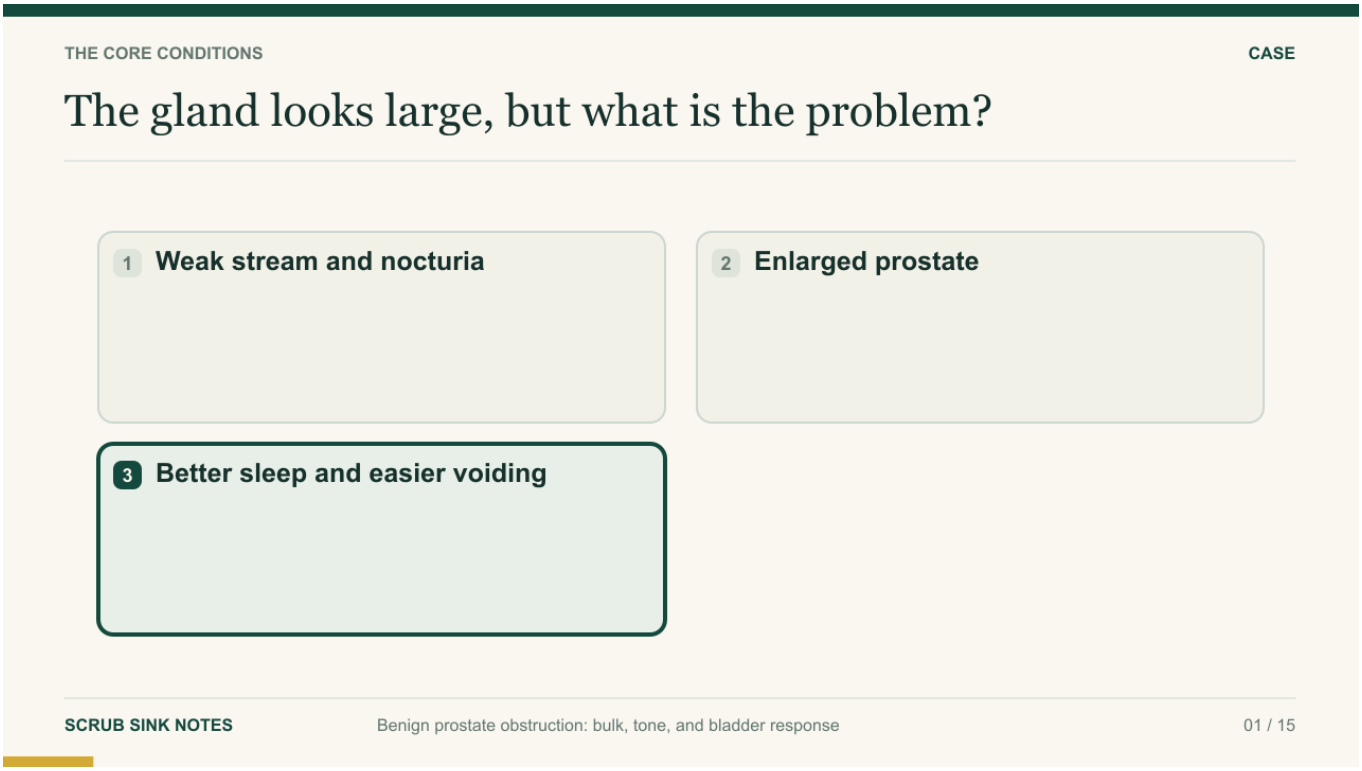
Return to our catheterized patient. The original culture alone did not establish infection. Now fever and flank pain develop. What changes? Pause. Assess the whole patient, look for urinary and nonurinary sources, obtain appropriate cultures, start timely treatment when infection is suspected, and check whether obstruction or a device problem requires source control.

Change one fact. What would change your next step?

LESSON 16 / TRY THE CASE

Benign prostate obstruction: bulk, tone, and bladder response

A fictional patient has a large prostate and bothersome urinary symptoms. The image does not tell you how much is outlet resistance, how well the bladder contracts, or which symptom matters most. Start with those questions. Benign hyperplasia describes tissue growth, while symptoms and obstruction are related but distinct clinical findings.



Your first response

What is the central decision? Which fact matters most? State an action and the reason for it.

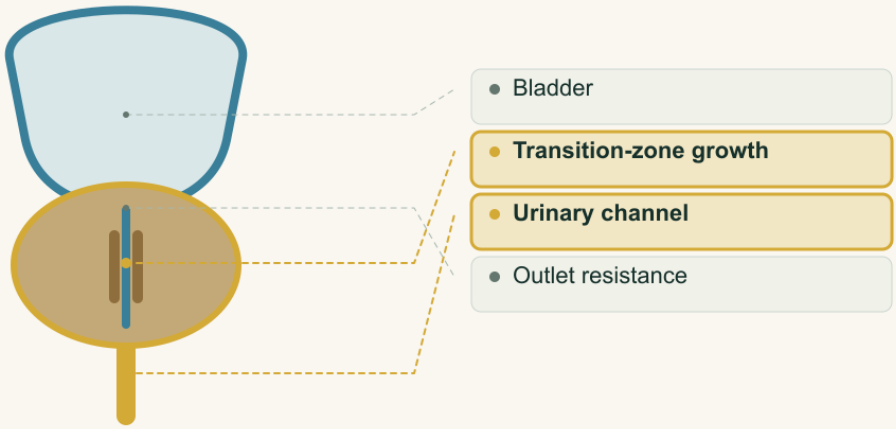
LESSON 16 / REVIEW AND TRANSFER

Benign prostate obstruction: bulk, tone, and bladder response

THE CORE CONDITIONS

MODEL

Growth around the urethra can narrow the channel



Schematic teaching model · not to scale

Benign hyperplasia develops mainly around the prostatic urethra in the transition zone. Growth can narrow the channel and increase resistance. The bladder may initially compensate with stronger contraction, while long-standing dysfunction can complicate emptying. This spatial relationship explains a mechanism, but prostate size alone does not prove that it causes every symptom.

Check the reasoning

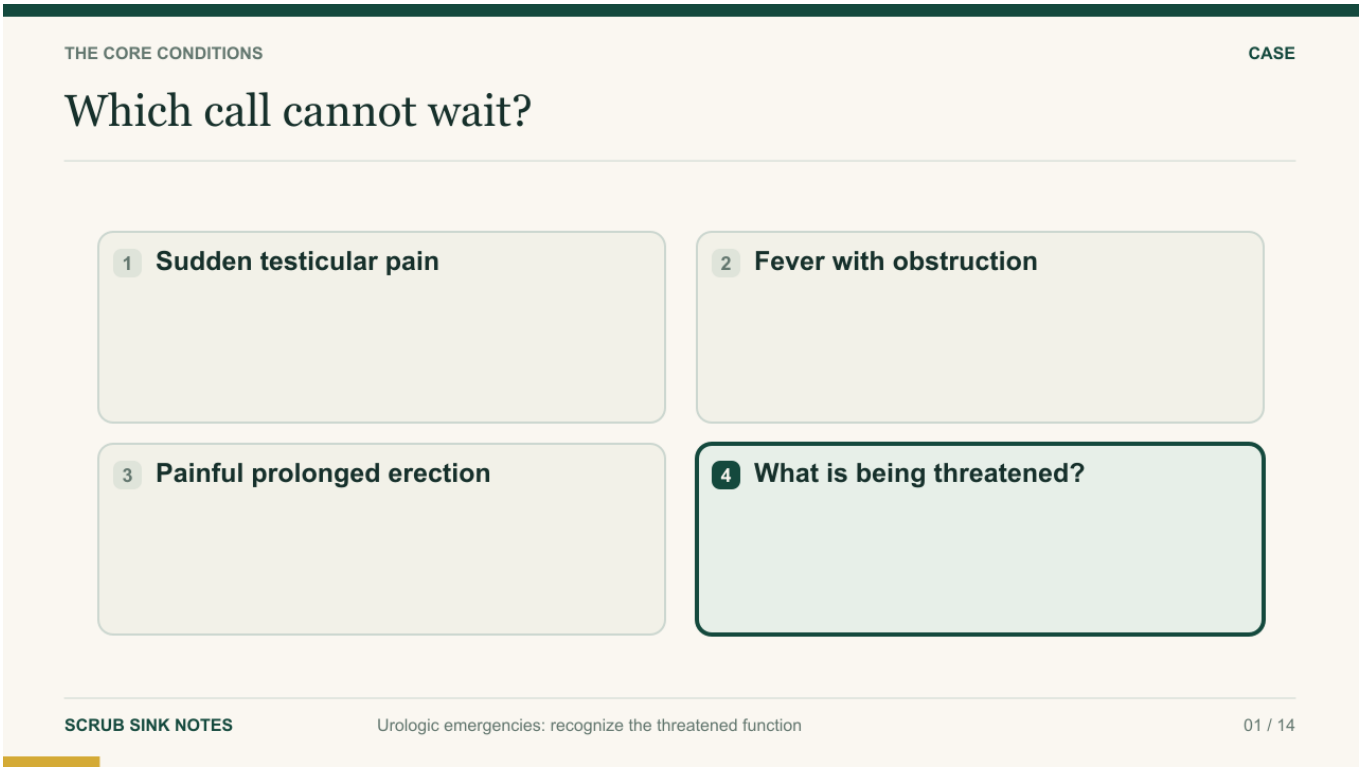
Return to our patient. Outlet treatment improved flow, but urgency remains. Does this prove the treatment failed? Pause. Storage dysfunction may persist independently or take time to improve. Reassess emptying, infection, other causes, and the patient's goals. A good explanation separates improved outlet resistance from the remaining bladder symptom rather than promising that one treatment fixes everything.

Change one fact. What would change your next step?

LESSON 17 / TRY THE CASE

Urologic emergencies: recognize the threatened function

Three fictional patients need assessment: sudden testicular pain, fever with an obstructed kidney, and a painful prolonged erection. The useful organizing question is what function or tissue is threatened. Then identify what you can start under supervision and whom to call. Memorizing a procedure name is less useful if the urgent mechanism remains unclear.

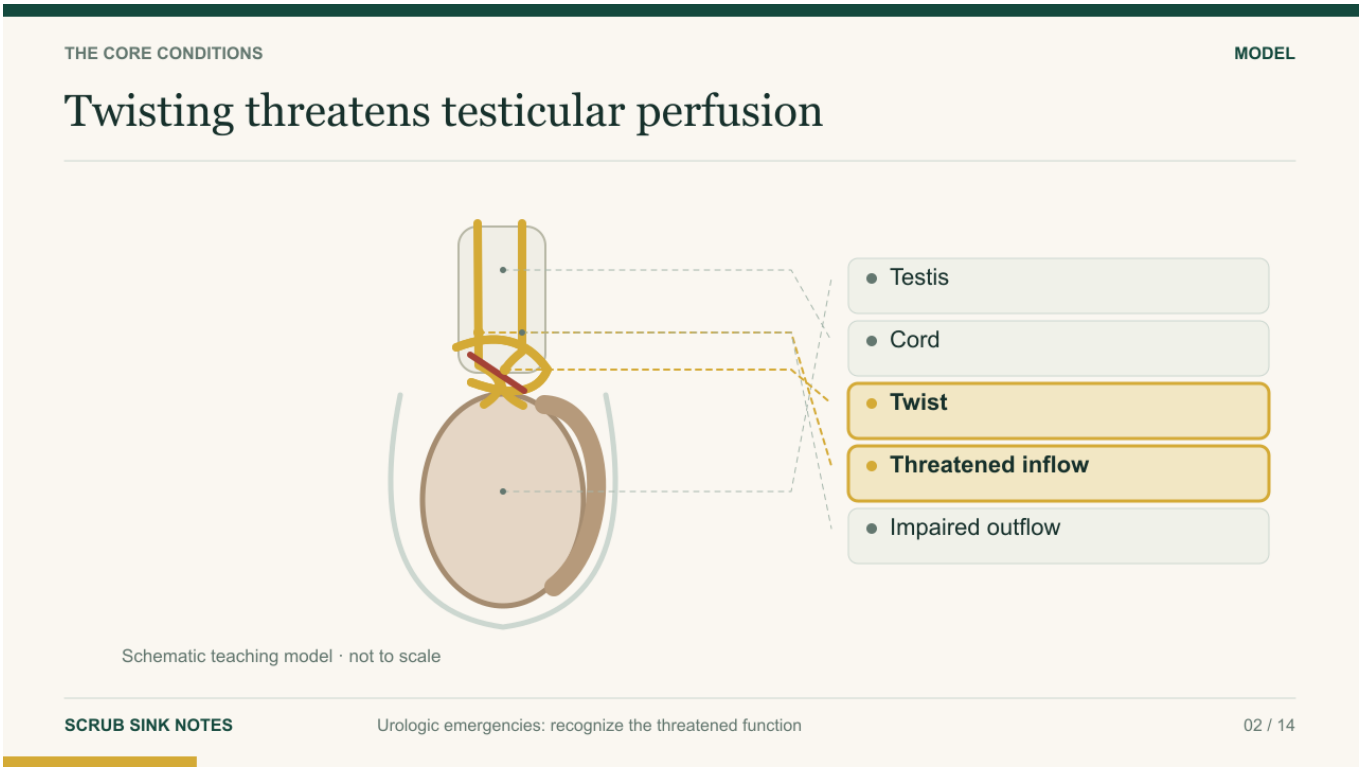


Your first response

What is the central decision? Which fact matters most? State an action and the reason for it.

LESSON 17 / REVIEW AND TRANSFER

Urologic emergencies: recognize the threatened function



A twisted spermatic cord threatens testicular blood flow. Sudden pain, nausea, an abnormal lie, and swelling raise concern. No single reassuring bedside sign excludes it. Contact urology urgently and avoid delaying a convincing presentation for routine imaging. Exploration can assess viability, untwist the cord, and secure the testis, with the other side commonly fixed as well.

Check the reasoning

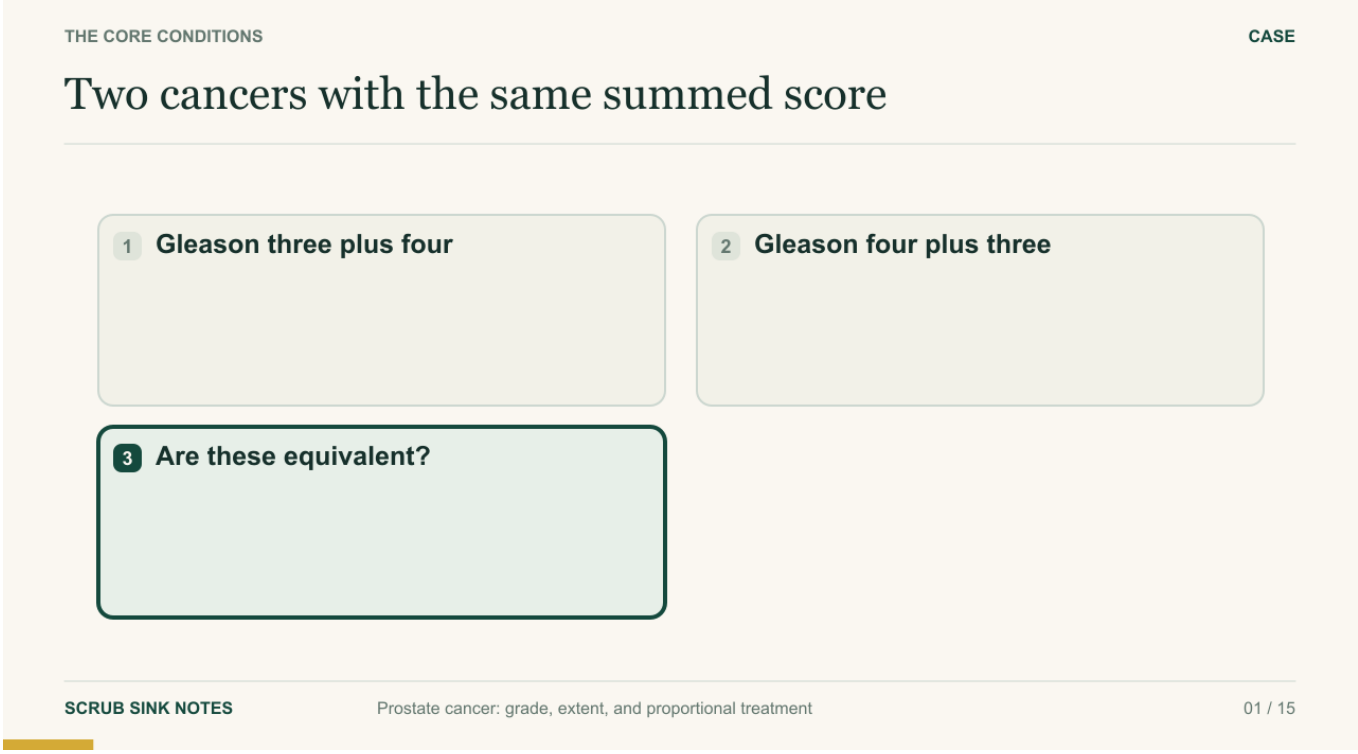
Return to the patient with fever and obstruction. The blood pressure is falling. Give your first sentence. Pause. State concern for sepsis with an obstructed urinary source, describe current instability, and request immediate senior help and source-control coordination. The detailed stone history can follow once the urgent risk and the required response are clear.

Change one fact. What would change your next step?

LESSON 18 / TRY THE CASE

Prostate cancer: grade, extent, and proportional treatment

Two fictional patients are told their prostate cancer has a Gleason score of seven. One has three plus four, and the other four plus three. The same sum does not mean the same biology. This lesson connects tissue grade, disease extent, and patient priorities so that treatment intensity has a reason behind it.

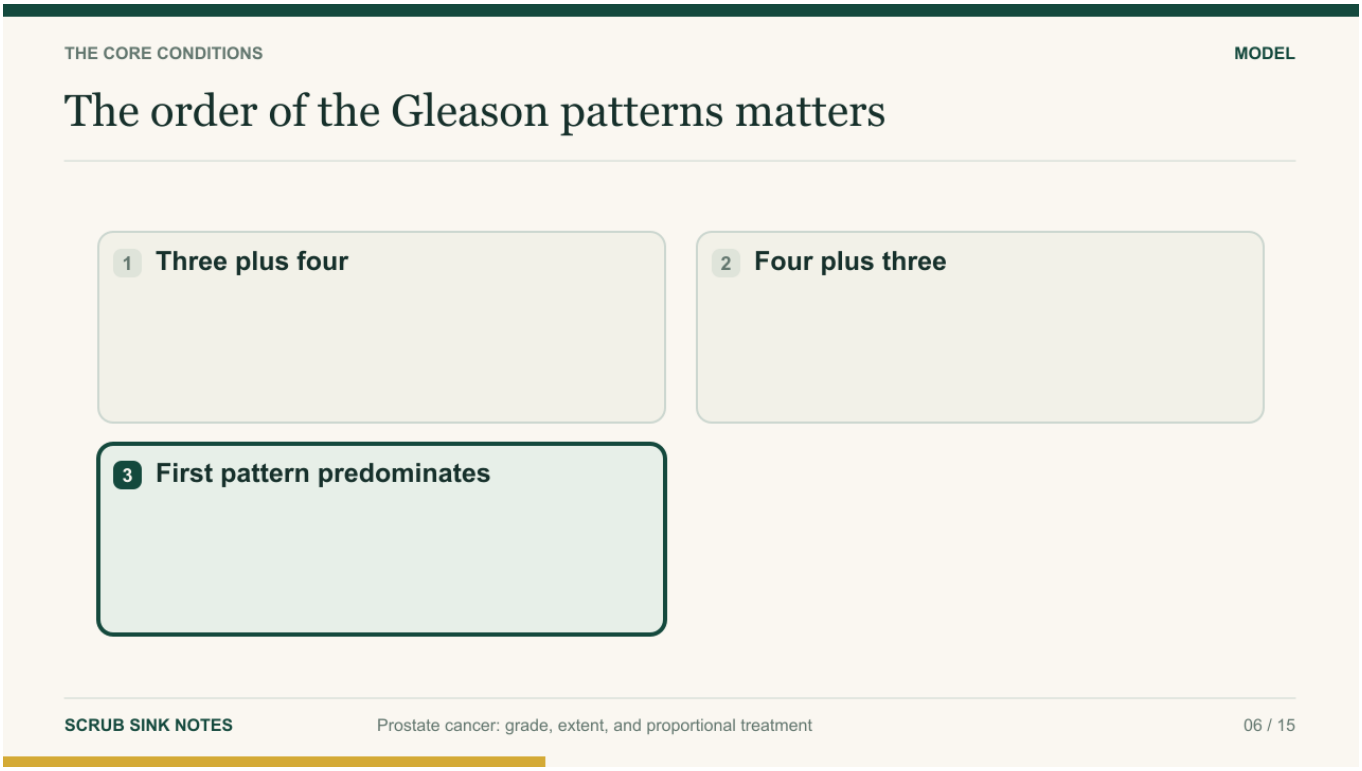


Your first response

What is the central decision? Which fact matters most? State an action and the reason for it.

LESSON 18 / REVIEW AND TRANSFER

Prostate cancer: grade, extent, and proportional treatment



Gleason grading describes the architecture of the tumor. In the usual biopsy explanation, the first listed pattern is predominant. Three plus four contains more pattern three, while four plus three contains more pattern four. The latter generally carries more concerning biology. Grade needs the complete pathology interpretation, including details beyond the sum when the team assesses risk.

Check the reasoning

Return to the two patients with a score of seven. Explain the difference in plain language. Pause. Both scores contain patterns three and four, but the predominant architecture differs. Four plus three is generally more concerning than three plus four. Then add that grade must be combined with the other risk and stage findings before deciding treatment.

Change one fact. What would change your next step?

LESSON 19 / TRY THE CASE

Bladder cancer: the muscle boundary changes the plan

A fictional patient had one episode of painless visible blood that stopped before the appointment. The symptom has resolved, but the reason has not been established. Explain that several causes are possible and that malignancy needs consideration. This starts a pathway that asks where a lesion is, what type it is, and how deeply it extends.



Your first response

What is the central decision? Which fact matters most? State an action and the reason for it.

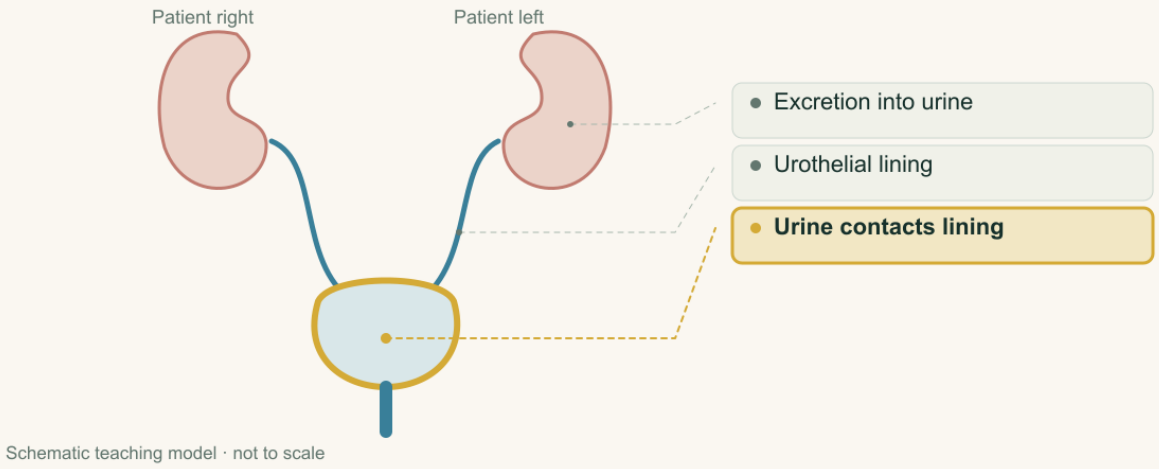
LESSON 19 / REVIEW AND TRANSFER

Bladder cancer: the muscle boundary changes the plan

THE CORE CONDITIONS

MODEL

The lining meets substances carried in urine



Tobacco and some occupational exposures increase urothelial cancer risk. Substances excreted in urine come into contact with the urinary lining. Prior pelvic radiation, cyclophosphamide, and selected chronic inflammatory exposures also matter. Urothelial carcinoma is common in this setting, while other cell types have different associations. A risk history sharpens concern but cannot identify the pathology by itself.

Check the reasoning

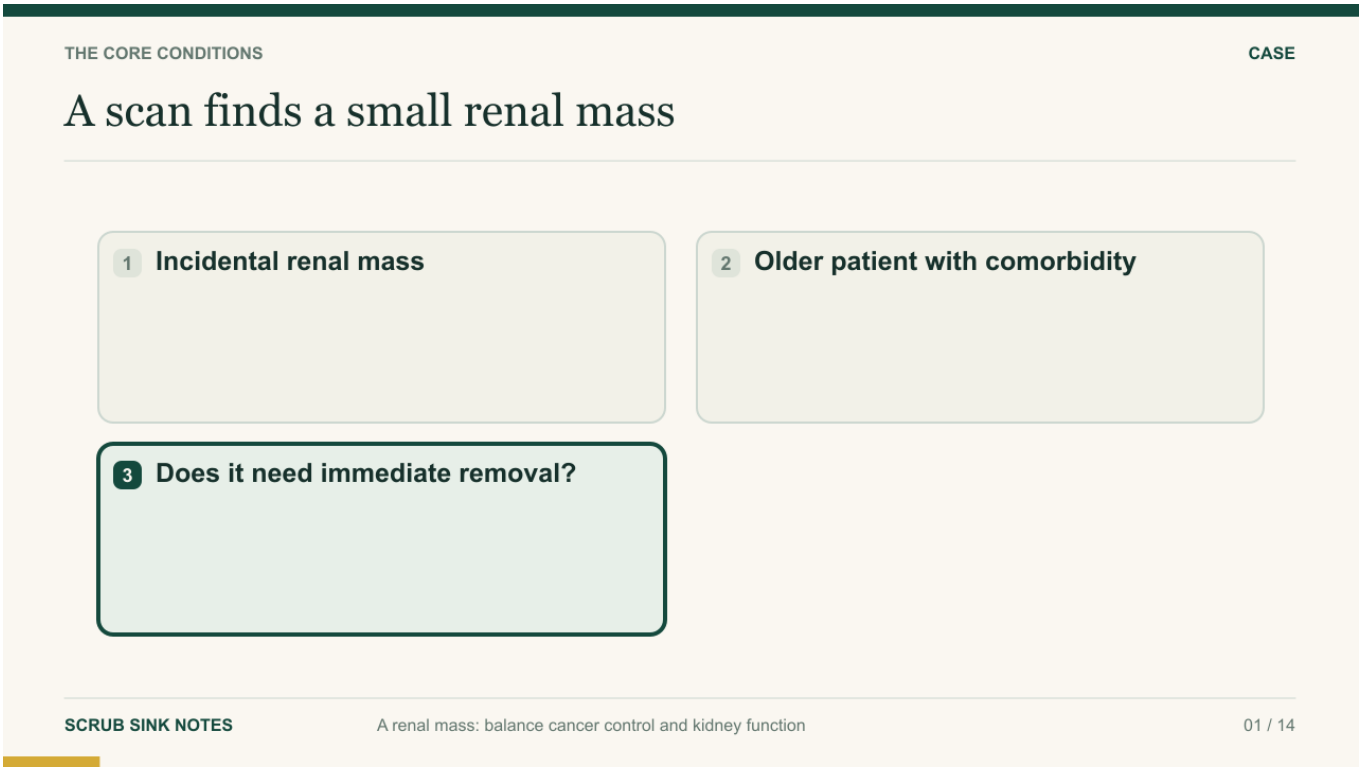
Return to the patient after resection. The pathology report does not adequately establish the depth. Why might another procedure be needed even though the visible lesion was removed? Pause. Treatment depends on accurate staging as well as removal. The team must establish whether residual or deeper disease would change the recommended pathway.

Change one fact. What would change your next step?

LESSON 20 / TRY THE CASE

A renal mass: balance cancer control and kidney function

A fictional patient has a small renal mass discovered during an unrelated scan. The patient hears kidney cancer and asks for immediate removal of the whole kidney. Before agreeing, characterize the lesion, assess its extent, and consider the person's health and kidney function. An incidental mass creates a decision, not an automatic operation.



Your first response

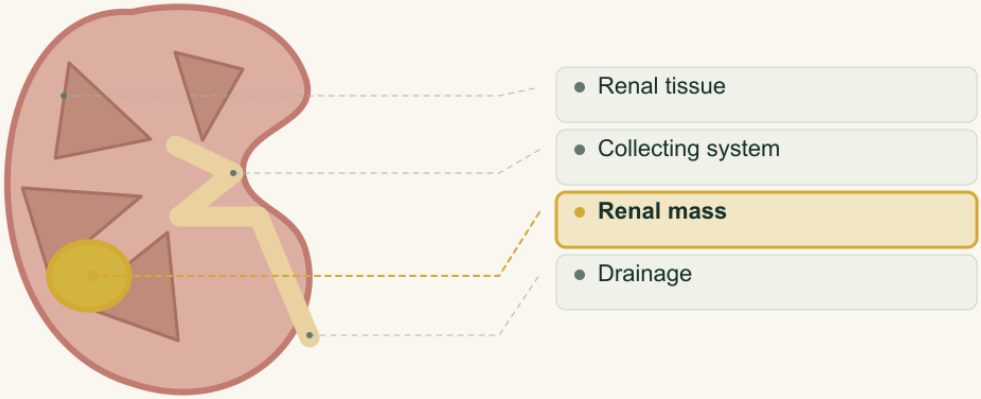
What is the central decision? Which fact matters most? State an action and the reason for it.

LESSON 20 / REVIEW AND TRANSFER

A renal mass: balance cancer control and kidney function

THE CORE CONDITIONS MODEL

A kidney lesion can arise in different structures



Schematic teaching model · not to scale

Renal cell carcinoma arises from kidney tissue, while a tumor in the collecting-system lining can be a different disease. The scan must help establish whether the finding is a simple cyst, a complex cystic lesion, a solid enhancing mass, or something else. Location and enhancement matter more than the word spot in a report.

Check the reasoning

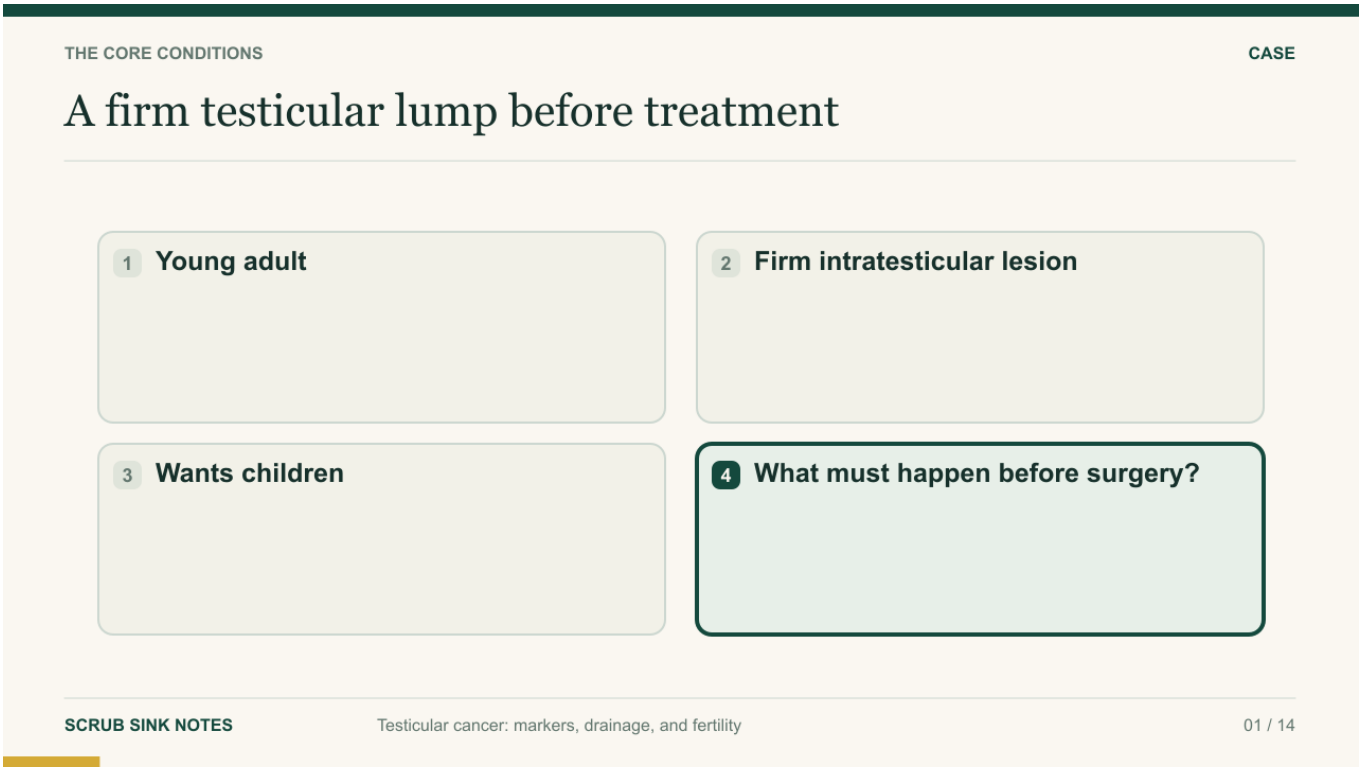
Return to our patient, now found to have limited kidney reserve. Why might automatic radical nephrectomy be the wrong starting point? Pause. Consider surveillance, biopsy if it would change care, partial nephrectomy, or selected ablation. The right choice depends on cancer risk and patient factors, with preservation of renal function considered explicitly.

Change one fact. What would change your next step?

LESSON 21 / TRY THE CASE

Testicular cancer: markers, drainage, and fertility

A fictional young adult has a firm testicular lesion on ultrasound and hopes to have children. The next steps should establish baseline tumor information, assess the appropriate treatment route, and address fertility promptly. Many testicular cancers are highly curable, including some advanced presentations, but an individual plan requires the tumor type and extent rather than a generic survival promise.

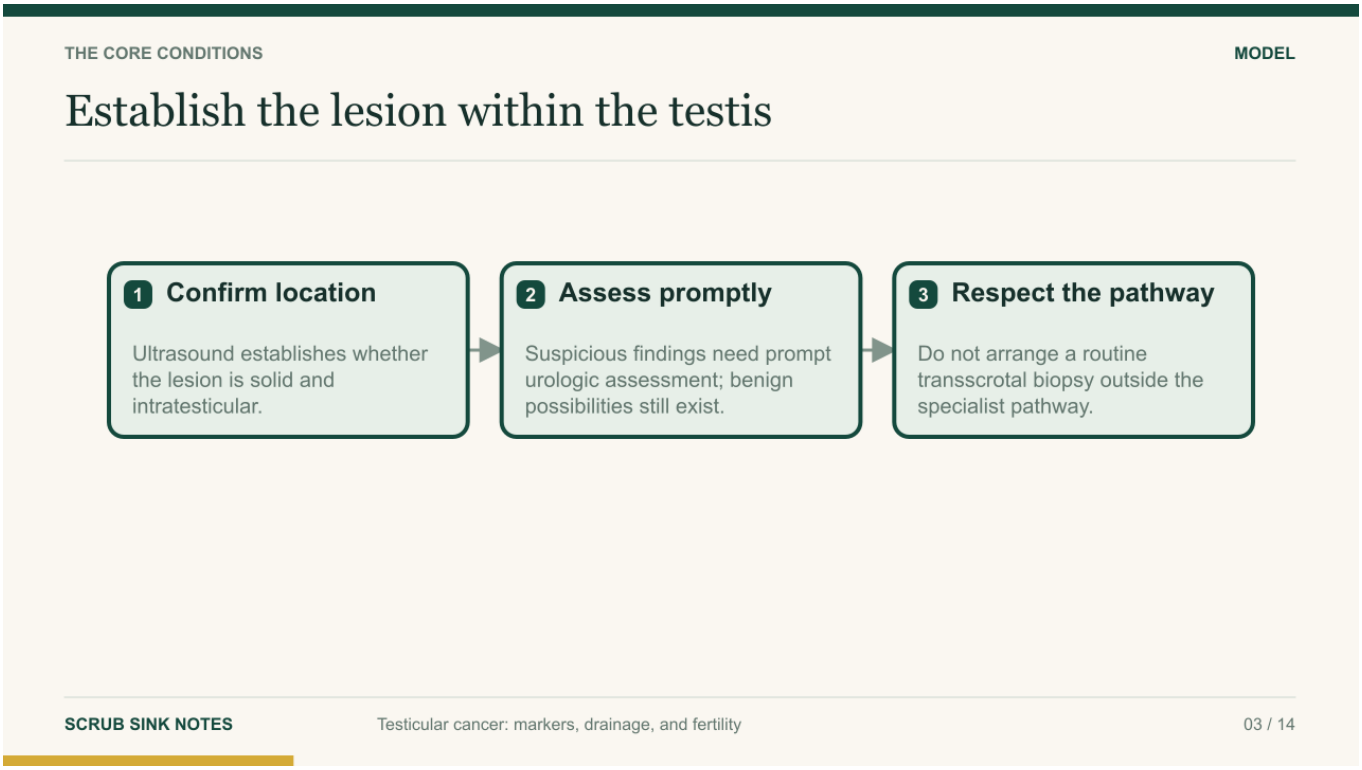


Your first response

What is the central decision? Which fact matters most? State an action and the reason for it.

LESSON 21 / REVIEW AND TRANSFER

Testicular cancer: markers, drainage, and fertility



Ultrasound helps establish whether the lesion is solid and intratesticular. A suspicious finding needs prompt urologic assessment. Benign possibilities exist, and selected unusual cases may have specialized management, but the student should not reassure or arrange an ordinary transscrotal biopsy. The usual suspected-cancer pathway respects the testis and its drainage anatomy.

Check the reasoning

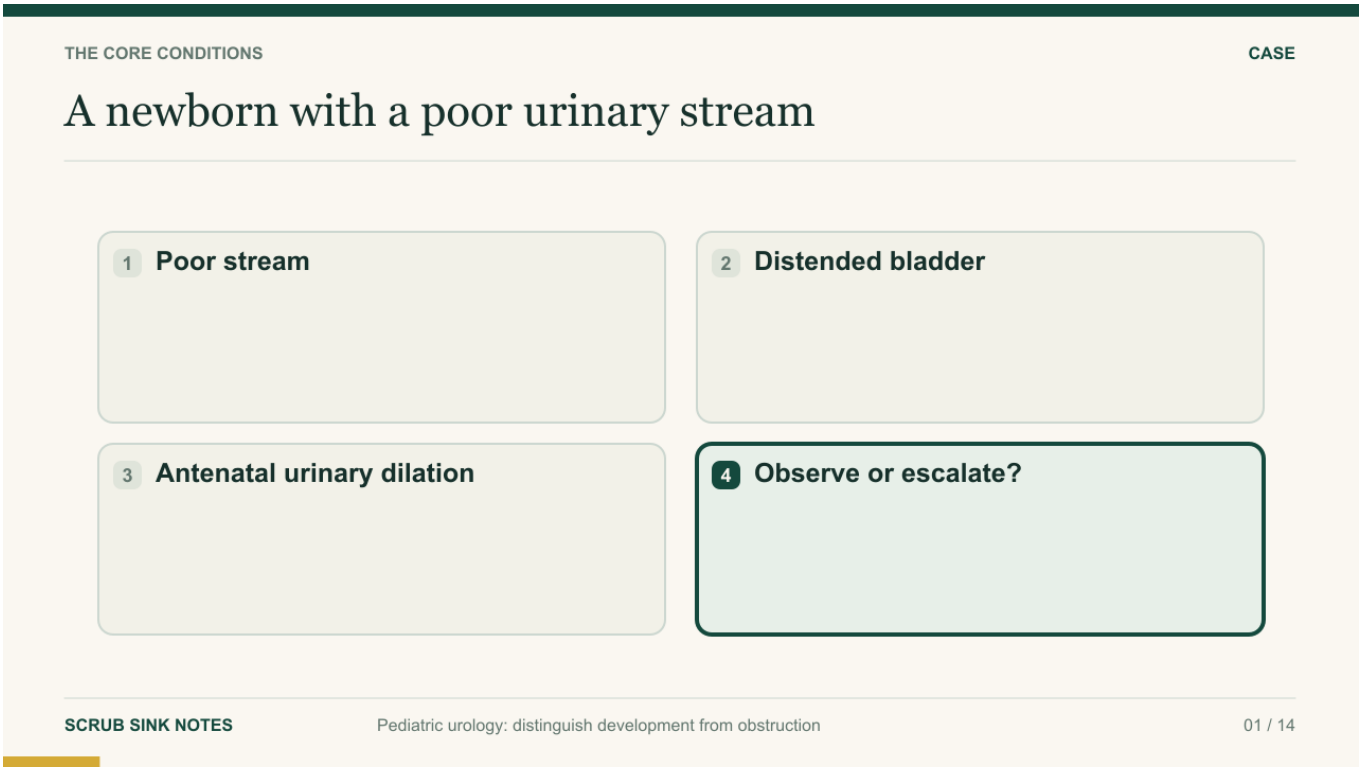
Return to our patient. Name three priorities before primary surgery. Pause. Obtain appropriate baseline markers, confirm the specialist inguinal treatment pathway, and discuss fertility preservation promptly. Then staging and pathology can guide what follows. Giving the patient a clear sequence supports understanding at a time when a new cancer concern can make information difficult to absorb.

Change one fact. What would change your next step?

LESSON 22 / TRY THE CASE

Pediatric urology: distinguish development from obstruction

A fictional newborn has a weak urinary stream, a distended bladder, and urinary dilation noted before birth. Some childhood findings resolve with development. This combination needs prompt assessment for obstruction. Pediatric reasoning starts by deciding which findings fit development and which threaten infection control, kidney function, or normal urinary drainage.

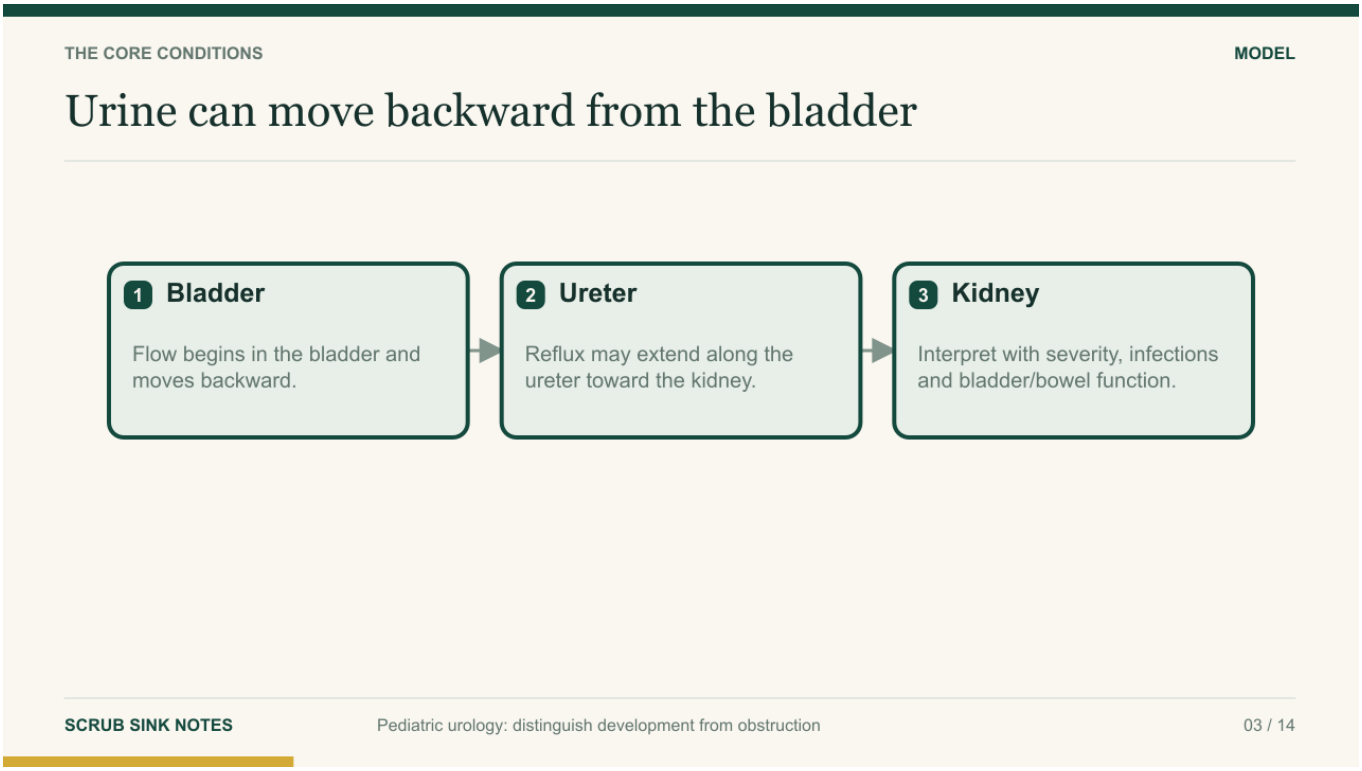


Your first response

What is the central decision? Which fact matters most? State an action and the reason for it.

LESSON 22 / REVIEW AND TRANSFER

Pediatric urology: distinguish development from obstruction



Vesicoureteral reflux is backward movement from the bladder toward the ureter and kidney. A voiding contrast study is used selectively to identify and grade it when indicated. Severity, recurrent infection, bladder and bowel function, and kidney findings influence management. Preventive antibiotics may help selected children but should not be described as necessary for every reflux finding.

Check the reasoning

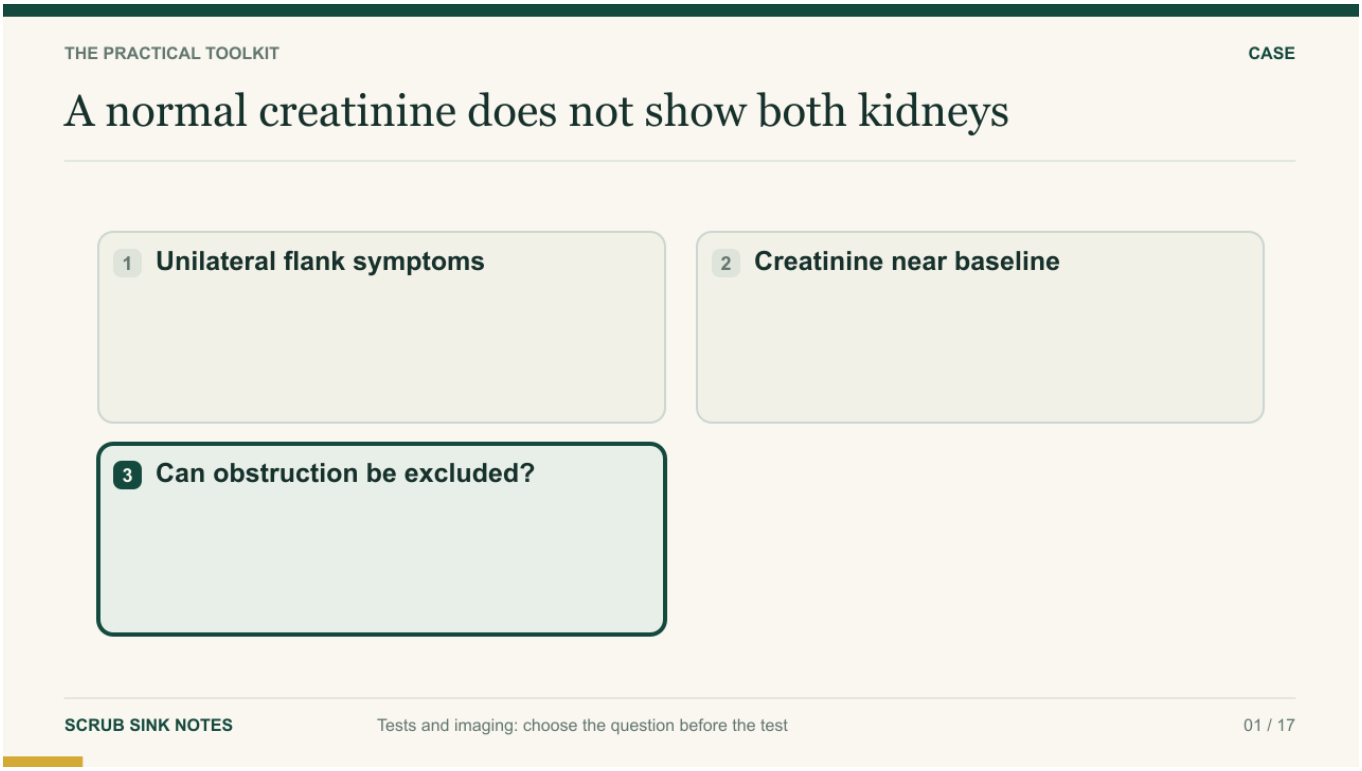
Return to the newborn. Why is this more concerning than mild isolated antenatal dilation? Pause. The poor stream and distended bladder suggest a downstream emptying problem that can affect both kidneys. Escalate promptly. The goal is to protect function while the team defines the anatomy, not simply to repeat a scan months later.

Change one fact. What would change your next step?

LESSON 23 / TRY THE CASE

Tests and imaging: choose the question before the test

A fictional patient has persistent one-sided flank symptoms and a creatinine near baseline. Someone says the kidney cannot be obstructed because the blood result is normal. Before accepting that conclusion, ask what creatinine measures. A combined estimate of filtration cannot show whether one urinary drainage route is blocked while the other kidney continues working.



Your first response

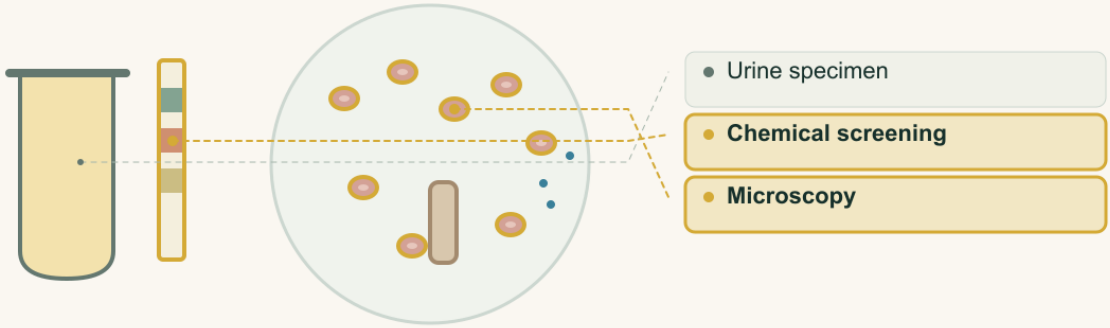
What is the central decision? Which fact matters most? State an action and the reason for it.

LESSON 23 / REVIEW AND TRANSFER

Tests and imaging: choose the question before the test

THE PRACTICAL TOOLKIT MODEL

A chemical screen differs from looking at cells



Schematic teaching model · not to scale

SCRUB SINK NOTES Tests and imaging: choose the question before the test 02 / 17

The dipstick detects chemical reactions. Microscopy identifies cells and other sediment structures. Leukocyte esterase supports inflammation, and nitrite suggests certain bacterial metabolism, but neither substitutes for the symptom context. A positive result in an asymptomatic person is not an automatic treatment order. A negative nitrite also cannot exclude infection.

Check the reasoning

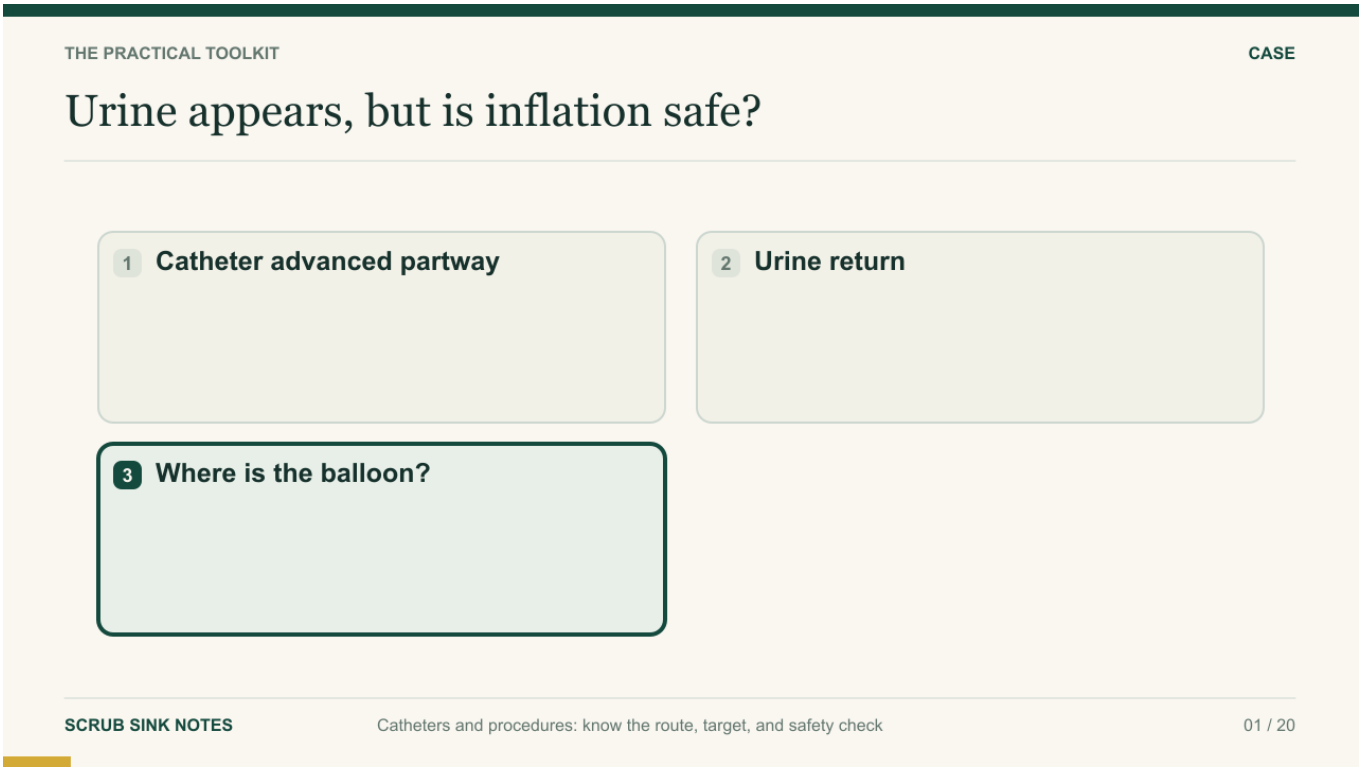
Return to the patient with a normal creatinine. What answers the possible obstruction question? Pause. Obtain the appropriate imaging and assess the whole picture. The other kidney can preserve the blood result while unilateral disease remains. Likewise, do not infer infection from culture alone or a normal bladder from negative cytology. Know what each test can actually establish.

Change one fact. What would change your next step?

LESSON 24 / TRY THE CASE

Catheters and procedures: know the route, target, and safety check

A fictional student sees urine return during catheter insertion and reaches to inflate the balloon. Urine can appear before every part of the catheter is safely within the bladder. The safety question is where the balloon lies. Learn the procedure through supervised training, local protocol, and device instructions, with explicit checks rather than a memorized sequence alone.



Your first response

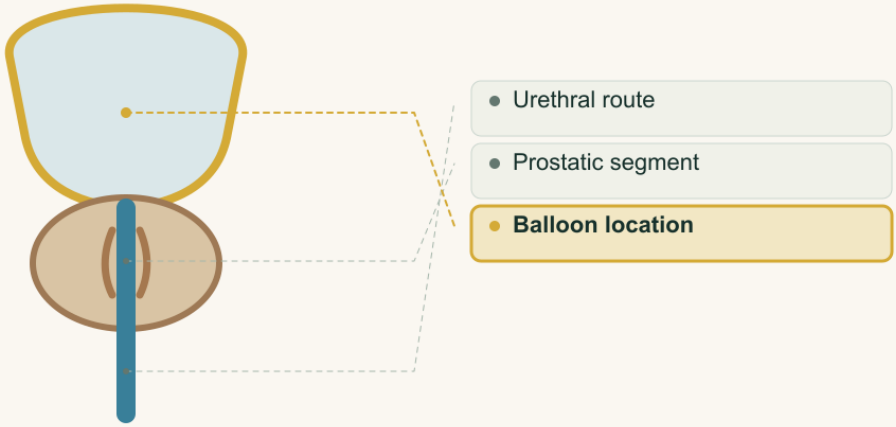
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LESSON 24 / REVIEW AND TRANSFER

Catheters and procedures: know the route, target, and safety check

THE PRACTICAL TOOLKIT MODEL

The catheter and balloon must reach the bladder



Schematic teaching model · not to scale

During supervised insertion, identify the correct anatomy and advance gently according to the device and local protocol. Confirm bladder position before inflation, using urine return plus adequate advancement and other checks when needed. Inflate only with the specified medium and volume. Pain, resistance, or uncertainty requires reassessment. Never force a catheter or inflate a balloon to test where it is.

Check the reasoning

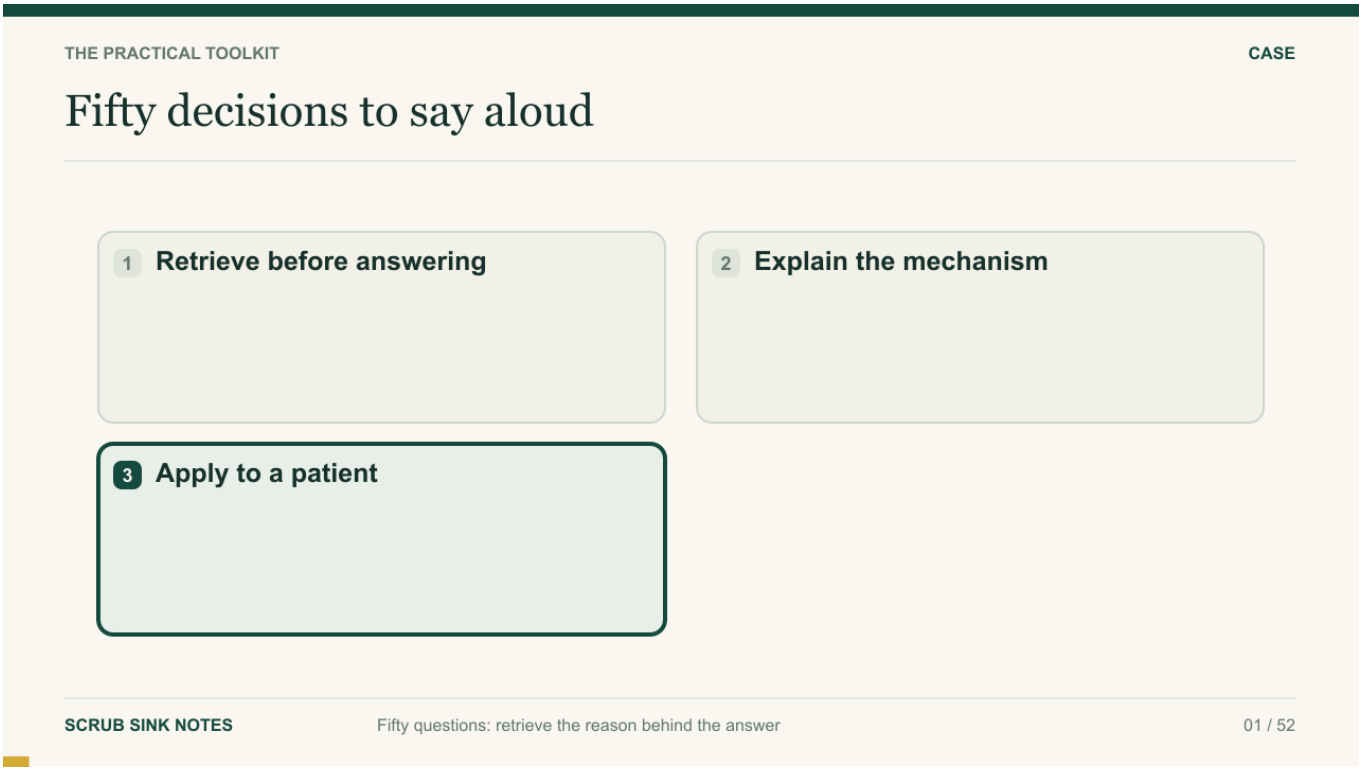
Return to the catheter scenario. What must be established before balloon inflation? Pause. Confirm bladder placement according to supervised practice and the device instructions, including adequate advancement rather than urine return alone. If uncertain, stop and seek help. Then replace the foreskin when relevant, secure drainage, document the result, and define when the device should come out.

Change one fact. What would change your next step?

LESSON 25 / TRY THE CASE

Fifty questions: retrieve the reason behind the answer

Use this lesson as an active circuit. Each short question has a visual cue and a concise explanation. Pause before the answer, speak your reasoning, and identify the patient detail that could change it. These are original teaching prompts based on the course, not recalled examination items. Return to the relevant lesson when an answer needs more than a memorized phrase.

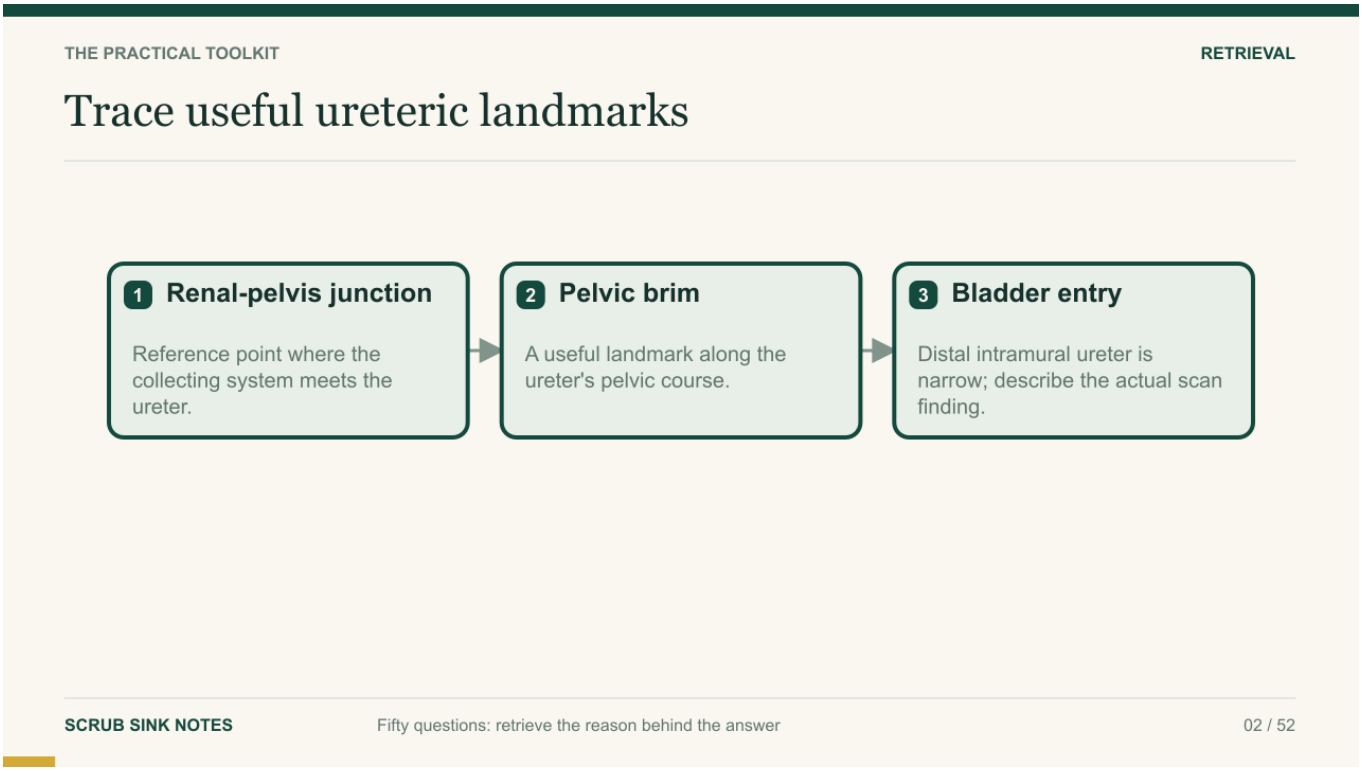


Your first response

What is the central decision? Which fact matters most? State an action and the reason for it.

LESSON 25 / REVIEW AND TRANSFER

Fifty questions: retrieve the reason behind the answer



Which landmarks help describe a ureteric stone location? Pause. Use the renal-pelvis junction, pelvic brim, and bladder entry as anatomical reference points. Distal location and size influence passage. Do not assume every stone sits at one of three exact narrowing points. Describe the actual scan finding.

Check the reasoning

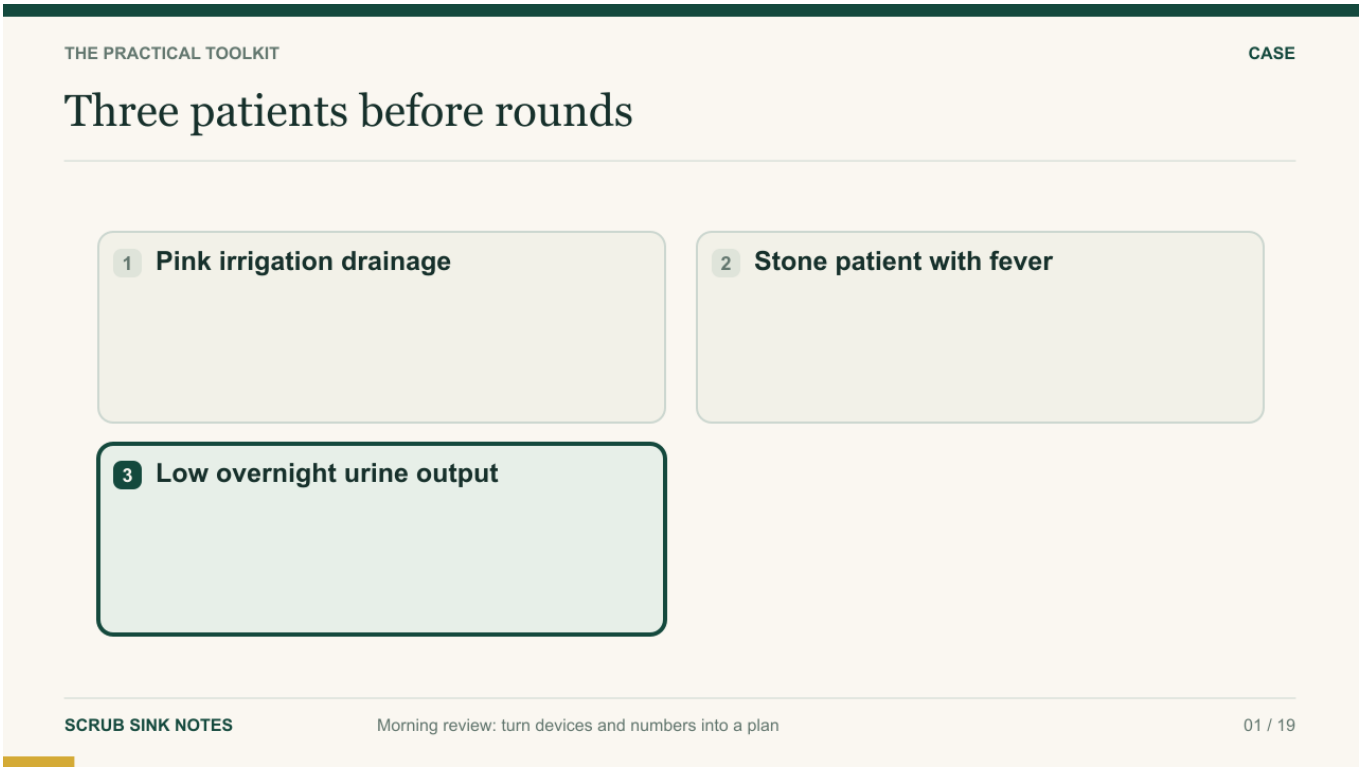
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Change one fact. What would change your next step?

LESSON 26 / TRY THE CASE

Morning review: turn devices and numbers into a plan

Before fictional morning rounds, you review three patients. One has pink drainage on bladder irrigation, one has a stone and a new fever, and one has low urine output. A quick reference is useful only when it helps you find the mechanism and the next decision. We will use the course tools to prepare three concise handovers.

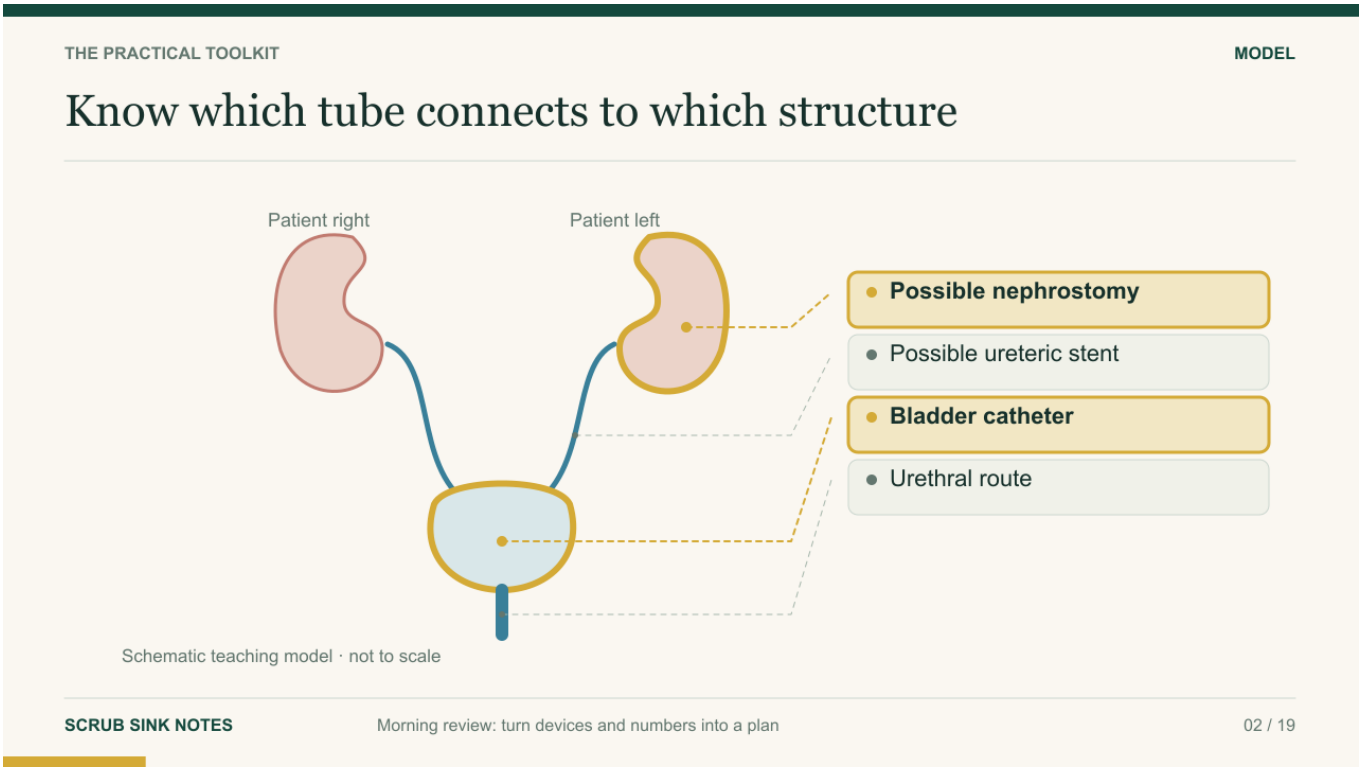


Your first response

What is the central decision? Which fact matters most? State an action and the reason for it.

LESSON 26 / REVIEW AND TRANSFER

Morning review: turn devices and numbers into a plan



Map every urinary device to the structure it drains or supports. A nephrostomy drains a kidney externally. A ureteric stent runs internally between kidney and bladder. A bladder catheter drains the reservoir. Record each source separately and check the documented removal or exchange plan. A single bag total cannot tell the whole story when several tubes are present.

Check the reasoning

For the first patient, what should you report beyond pink urine? Pause. State whether drainage is free, whether clots or pain occurred, the irrigation setting and fluid accounting, and relevant hemoglobin and vital-sign trends. Include the planned step, such as reducing irrigation or a trial of void, and who will authorize it.

Change one fact. What would change your next step?

A useful final review

Choose three lessons you found difficult. For each, draw the relationship from memory, speak through a fresh case, then check the figure. Record the reason for any change in your answer.

Source and scope

These original practice pages follow the matching video storyboards. Clinical corrections and source references are supplied with the course. A source locator records provenance, not independent validation of every statement. Interview models are constructed teaching examples, not real school answers or a guaranteed scoring formula.