

Tumors and Cysts

Fallopian tube pathology

Paratubal cysts • Adenomatoid tumor • Tubal serous precursors

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Learning objectives

Recognize the characteristic features of paratubal cysts and hydatids of Morgagni.

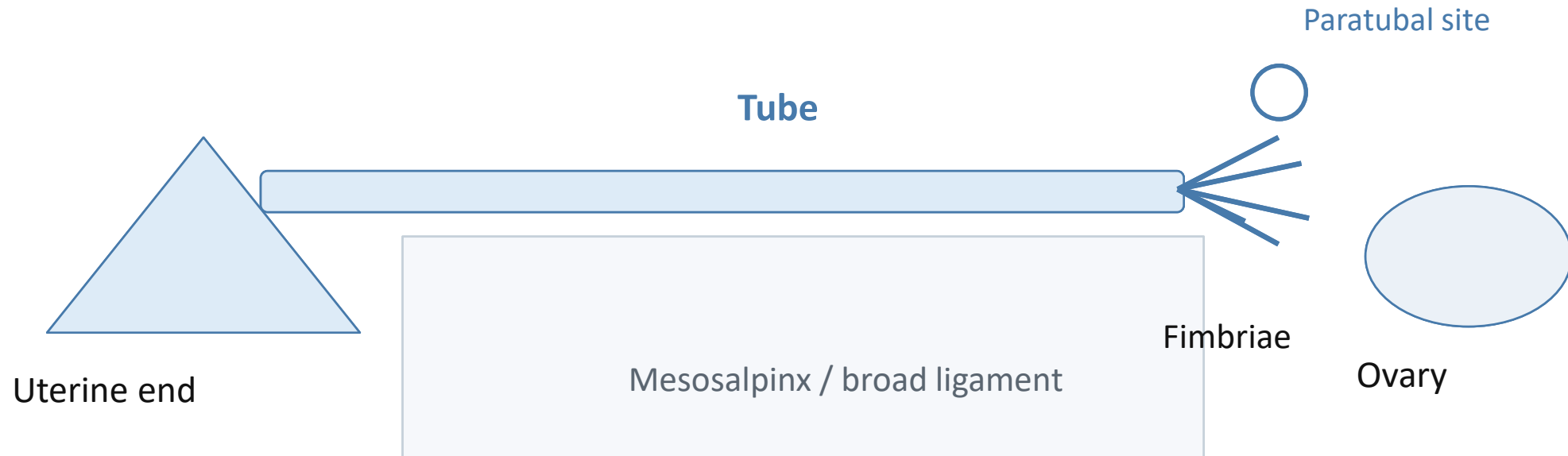
Localize adenomatoid tumors and distinguish them from cystic lesions.

Explain the evidence linking tubal epithelium, STIC, and high-grade serous carcinoma.

Apply the tubal-origin model to clinicopathologic interpretation.

The fallopian tube is the anatomical focus

Simplified topography — schematic, not a specimen



Tubal epithelial origin ↔ ovarian involvement are distinct sites

Three lesion categories frame this topic

01

Paratubal cysts

Common, benign, serous-fluid lesions.

02

Adenomatoid tumors

Uncommon benign tubal or mesosalpinx nodules.

03

Tubal serous precursors

Clinically important in high-grade serous carcinogenesis.

“Tubal mass” does not imply one diagnosis

01

Cyst vs. Nodule

A cystic paratubal lesion and a subserosal solid nodule are different entities.

02

In situ vs. Benign

An intraepithelial precursor is not equivalent to a benign cyst.

03

Diagnostic dimensions

Location, architecture, and biologic potential must be considered separately.

Fallopian tube disorders: The broader context

Inflammation and infection are frequent tubal disorders.

Ectopic pregnancy and endometriosis are other important tubal pathologies.

This lecture concentrates on cysts, benign tumors, and serous neoplastic origin.

Inflammation remains a separate disease category

Inflammation

Suppurative salpingitis is part of pelvic inflammatory disease.

Cysts / tumors

The supplied text identifies gonococci and chlamydiae among key causative organisms.

Inflammatory tubal lesions should not be classified as paratubal cysts or tumors.

Tubal tuberculosis: Why context matters

Tuberculous salpingitis is uncommon in the United States.

Its greater relevance where tuberculosis is prevalent.

Infertility is an important clinical consequence in high-prevalence settings.

Structure and behavior are independent axes

Anatomic location

Cystic versus nodular
describes gross form.

Structure

Benign, in situ, and invasive
describe biological categories.

Behavior

Neither axis alone establishes
the exact site of origin.

Paratubal cysts are the common primary lesions

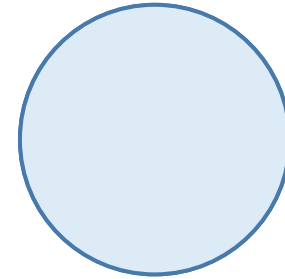
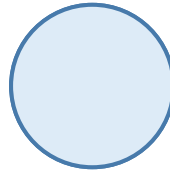
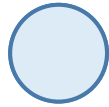
Paratubal cysts as the most common primary tubal lesions when endometriosis is excluded.

Their prevalence relative to other tubal tumors is qualitative in this excerpt.

They are generally of little clinical significance.

Typical size: 0.1–2 cm

0.1–2 cm

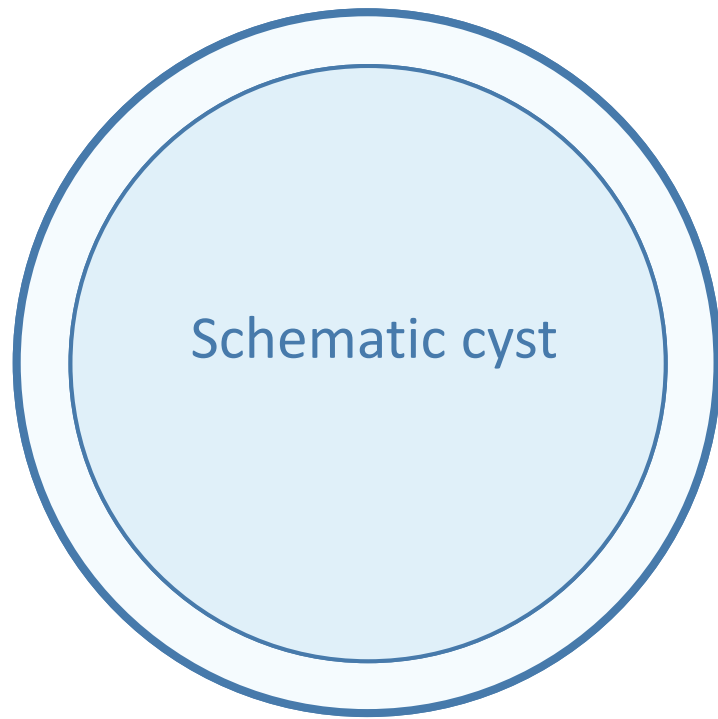


The source describes minute lesions within this size range.

Size is a gross descriptor, not by itself a malignancy criterion.

Larger named examples are discussed separately as hydatids of Morgagni.

Translucency is a macroscopic clue

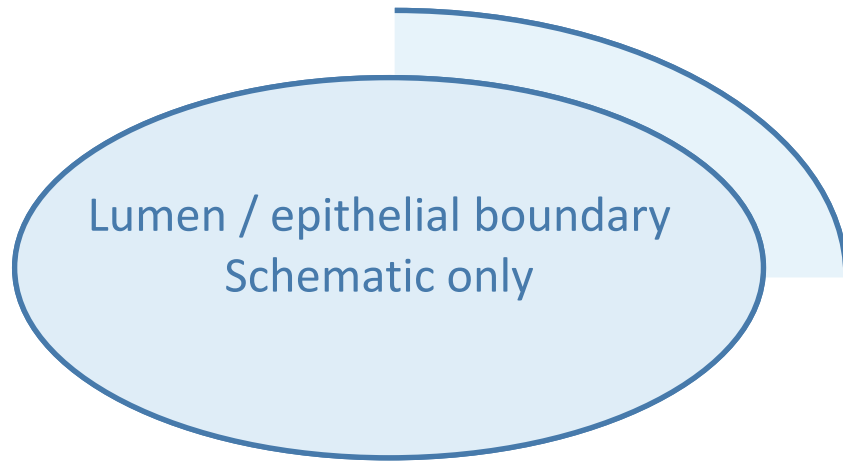


Paratubal cysts are described as translucent.

The appearance is consistent with their clear serous contents.

Gross translucency does not establish the microscopic lining by itself.

The cyst lumen contains clear serous fluid



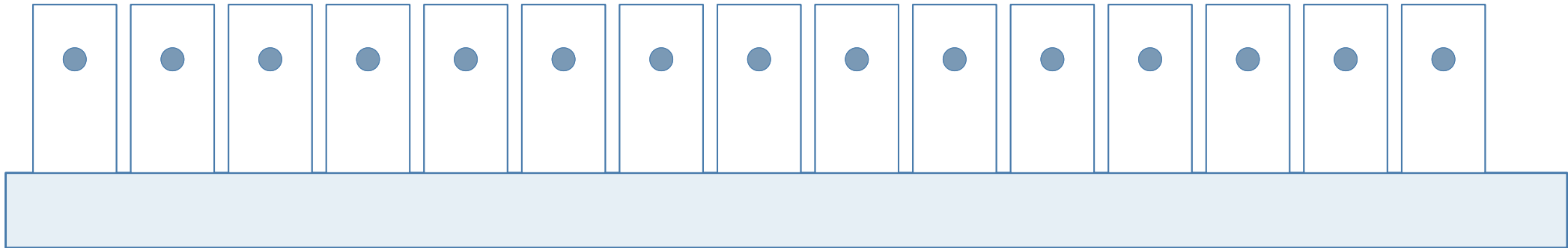
The fluid is specifically described as clear and serous.

The cavity is epithelial-lined rather than solid.

Fluid character should be integrated with site and epithelial morphology.

Lining epithelium is benign and tubal-type

Conceptual epithelial lining (not an H&E section)



Benign tubal-type epithelium

The source describes benign serous (tubal-type) epithelium.

Müllerian remnants are the presumed origin

Paratubal cysts are presumed to arise from remnants of the Müllerian duct.

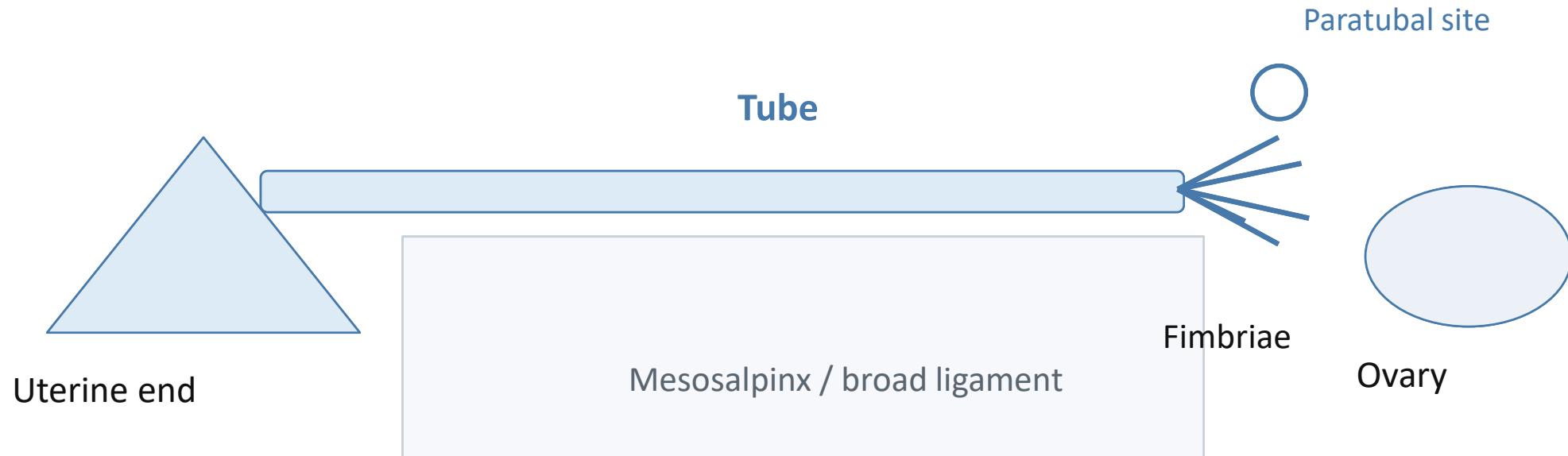
“Presumed” signals a proposed developmental origin.

Do not treat a presumed origin as directly demonstrated for every cyst.

Conceptual relationship; Arrows are schematic, not measured progression

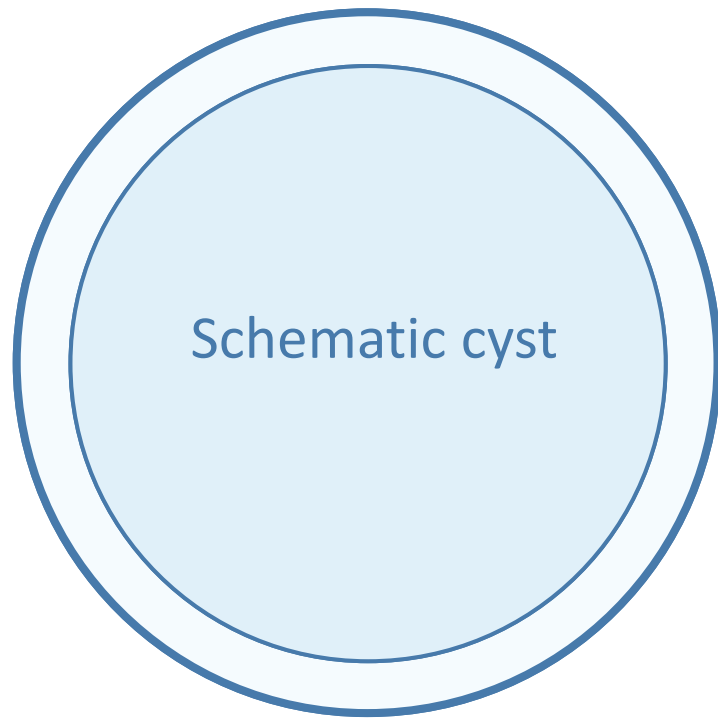
Localization: Beside rather than within ovary

Simplified topography — schematic, not a specimen



Tubal epithelial origin ↔ ovarian involvement are distinct sites

Hydatids of Morgagni: The named variant



The text uses this term for larger cysts near the fimbrial end or broad ligaments.

They belong to the same benign tubal-type cyst spectrum.

The terminology is an anatomical and gross-pathologic descriptor.

Paratubal cyst versus hydatid of Morgagni

Paratubal cyst

Paratubal cyst: The general common cystic lesion.

Hydatid of Morgagni

Hydatid of Morgagni: A larger example in a characteristic location.

Both are described with benign serous/tubal-type epithelium.

Gross and microscopic descriptions complement one another

Gross: Small, translucent,
clear-fluid cavity.

Microscopy: Benign
serous/tubal-type epithelial
lining.

Interpretation: A lesion of little
significance description.

Conceptual relationship; Arrows are schematic, not measured progression

A benign cyst is not a serous carcinoma precursor by default

Paratubal cyst

A paratubal cyst is presented as benign.

Serous tubal in situ lesion

STIC is a distinct intraepithelial neoplastic lesion associated with serous carcinoma.

The excerpt does not claim that paratubal cysts progress to STIC.

What the cyst description can establish

Cystic architecture and a benign tubal-type lining support the cyst diagnosis.

The described lesion is not characterized by invasive growth.

The source does not prescribe a marker panel or quantitative diagnostic cutoff.

What the cyst description cannot establish

Translucency alone cannot prove site of origin.

The source does not define diagnostic sensitivity for gross appearance.

No malignancy risk estimate is supplied for an otherwise typical cyst.

Case 1: An incidental translucent adnexal cyst

Diagnostic application

A small, clear-fluid cyst is encountered adjacent to the tube.

The epithelial lining is benign and tubal-type.

Which entity best fits the source description, and why?

Case 1: Lesion-level interpretation

Favored diagnosis: Paratubal cyst.

Support: Location, minute translucent cavity, clear serous fluid, benign tubal lining.

Do not infer malignant potential from the word “serous” alone.

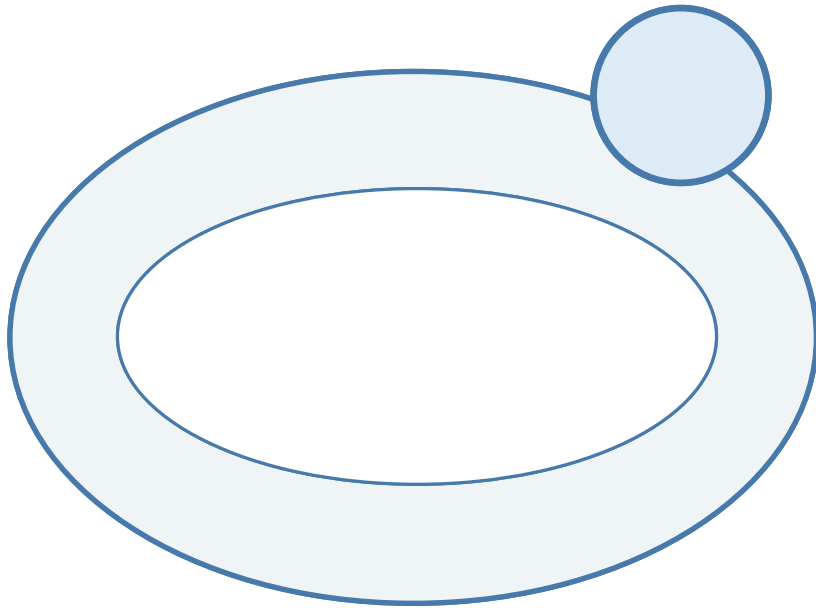
Benign tubal neoplasms are rare

Robbins explicitly describes benign tumors of the tube as rare.

Adenomatoid tumor is the example named in this passage.

Frequency is not quantified in the provided section.

Adenomatoid tumor: An uncommon benign nodule



Small subserosal nodule

The tubal lesion is described as a small nodule.

It is a benign tumor, not one of the common paratubal serous cysts.

Its anatomical relation to the tubal serosa is central in this source.

Subserosal tubal localization

Tubal lumen

Tubal wall

Outer serosal plane

Nearby mesosalpinx

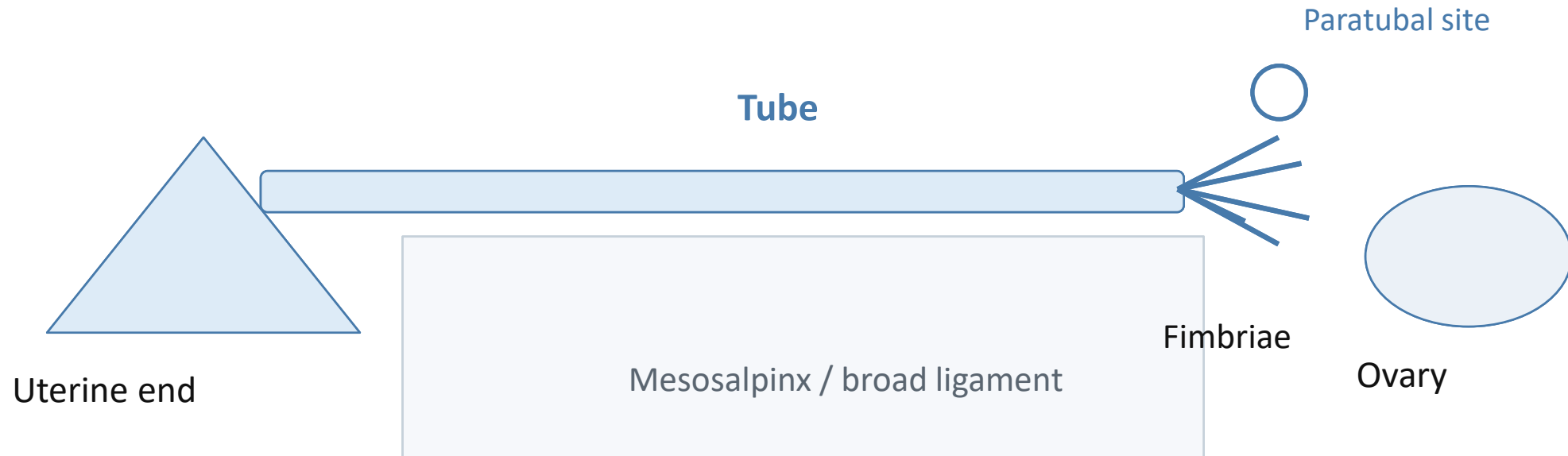
Adenomatoid tumor may occur beneath the serosa of the tube.

Subserosal localization is a tissue-plane descriptor.

Location must be distinguished from the tubal epithelial lumen.

The mesosalpinx is an alternative site

Simplified topography — schematic, not a specimen



Tubal epithelial origin ↔ ovarian involvement are distinct sites

Tubal and male genital counterparts

Fallopian tube / mesosalpinx

The source identifies counterparts in the testis and epididymis.

Testis / epididymis

This is a cross-organ comparison of the same named benign tumor.

The excerpt does not describe a hereditary or metastatic relationship.

Cyst versus adenomatoid nodule

Fluid-filled cyst

Paratubal cyst: Translucent, fluid-filled, epithelial-lined cavity.

Subserosal nodule

Adenomatoid tumor: Small benign subserosal or mesosalpinx nodule.

Gross form and tissue plane distinguish the two concepts.

A solid nodule demands a different question

First: Anatomical and morphologic localization

Confirm whether the lesion is in
tubal wall or mesosalpinx.

Assess whether the description is
cystic or nodular.

Do not assign a cyst diagnosis
without epithelial-lined cyst
architecture.

Case 2: Small subserosal tubal nodule

Diagnostic application

A small discrete nodule is identified beneath tubal serosa.

No serous-fluid cavity is described.

Which benign tumor is specifically named by Robbins at this location?

Case 2: Localize before naming

Adenomatoid tumor is the named benign tubal nodule.

Subserosal location fits the source description.

This is not evidence of a paratubal cyst or an intraepithelial serous carcinoma.

The major malignant insight is anatomical

Historically, primary fallopian tube carcinoma was regarded as rare.

That many “ovarian” serous carcinomas actually originate in tubal epithelium.

The conceptual change concerns site of origin, not merely renaming the cancer.

Why the ovarian label can be misleading

A carcinoma may present with an ovarian or pelvic mass.

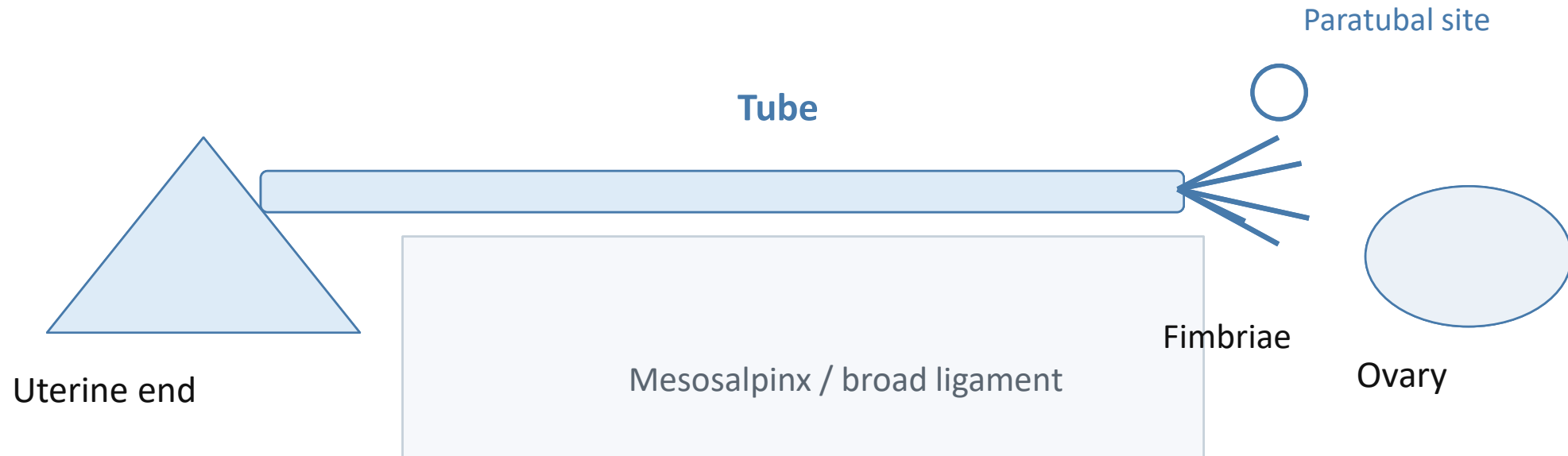
The initiating epithelial lesion may nevertheless have arisen in the tube.

Tumor distribution at presentation does not always identify its initiating site.

Conceptual relationship; Arrows are schematic, not measured progression

Fimbriae are central to the proposed pathway

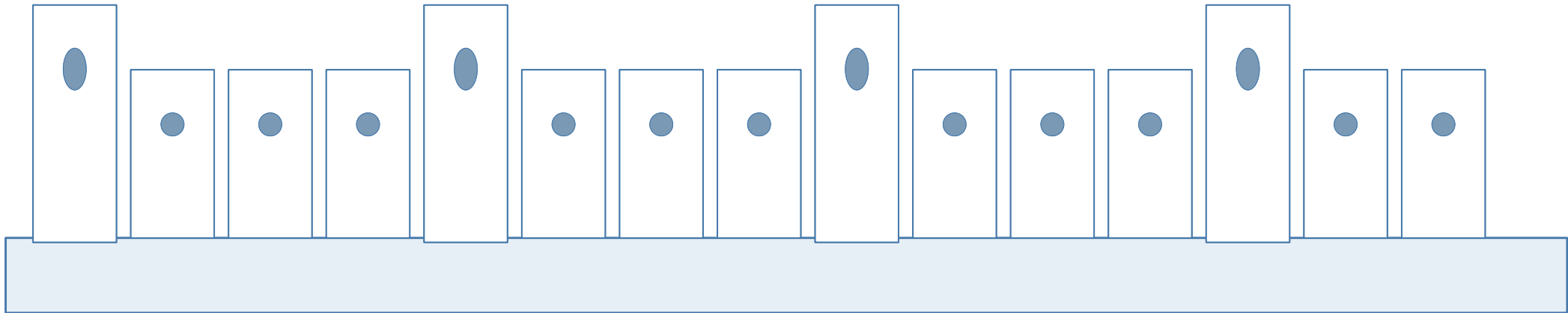
Simplified topography — schematic, not a specimen



Tubal epithelial origin ↔ ovarian involvement are distinct sites

STIC is an intraepithelial carcinoma

Conceptual epithelial lining (not an H&E section)



Atypical epithelium — simplified STIC concept

STIC means serous tubal intraepithelial carcinoma.

STIC: The atypical epithelial precursor

Marked epithelial atypia was observed in risk-reducing fallopian tubes.

These lesions were termed STIC.

The observation prompted reconsideration of the origin of high-grade serous carcinoma.

Observation 1: STIC in genetically high-risk tubes

STIC was identified during prophylactic salpingo-oophorectomy in BRCA1/2 germline mutation carriers.

This observation as an origin-of-cancer clue.

A precursor at a proposed primary site provides anatomically relevant evidence.

Observation 2: STIC with sporadic serous cancer

STIC lesions have also been described alongside sporadic high-grade serous carcinomas.

This extends the tubal-origin hypothesis beyond inherited-risk cases.

Association supports, but does not prove, the origin of every individual carcinoma.

Observation 3: Residual risk when tubes remain

The passage associates omission of tubal removal at oophorectomy with residual “ovarian” cancer risk.

This supports the clinical relevance of the fallopian tube.

The excerpt does not provide a patient-level risk estimate for this comparison.

Converging lines of evidence

01

Anatomy

Epithelial atypia at the fimbrial site.

02

Pathology

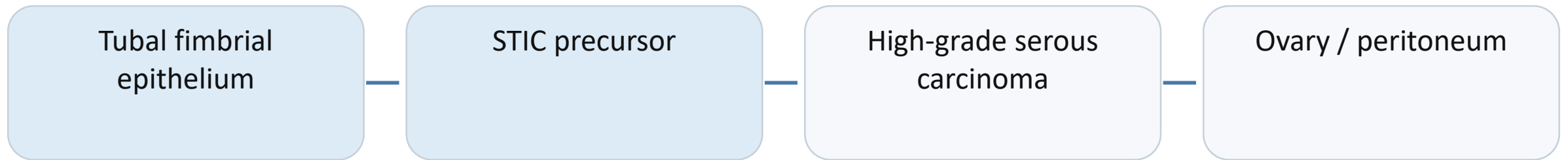
STIC associated with high-grade serous carcinoma.

03

Clinical observation

Cancer risk persists if fallopian tubes are left in place.

Source-supported tubal-origin pathway



Invasive disease can involve ovary and peritoneal surfaces.

A proposed origin is not the whole clinical distribution

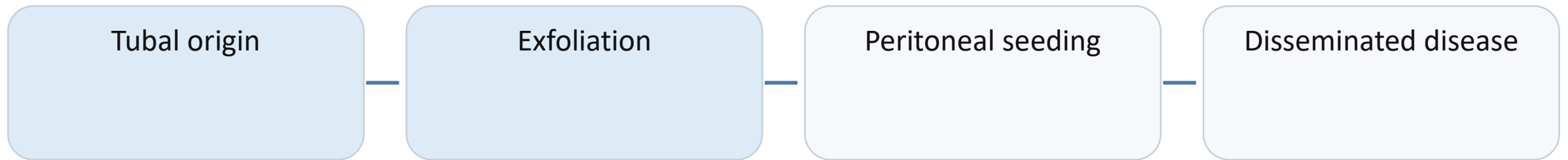
The presumed initiating tissue and the site of a large tumor mass may differ.

Many high-grade serous tumors are widely distributed when detected.

Nomenclature must not obscure the origin-versus-spread distinction.

Conceptual relationship; Arrows are schematic, not measured progression

Peritoneal dissemination fits the tubal model



A peritoneal pattern of disease is therefore compatible with tubal origin.

Not every high-grade serous tumor has visible STIC

Tubal precursor pathway

The exact fraction of sporadic tumors of tubal origin is unknown.

Alternative ovarian hypothesis

An ovarian inclusion-cyst pathway has also been proposed.

Absence of a documented STIC does not settle the origin in an individual case.

The ovarian inclusion-cyst hypothesis

Cortical inclusion cysts were historically proposed as a source of serous cancers.

A newer interpretation considers implantation of detached tubal epithelium onto ovulation-disrupted ovary.

The source presents these as explanatory hypotheses, not definitive mechanisms in all patients.

Conceptual relationship; Arrows are schematic, not measured progression

Two concepts should not be conflated

01

Distinct cyst sites

A benign paratubal cyst is not the same lesion as an ovarian cortical inclusion cyst.

02

Tubal precursor

STIC is a neoplastic tubal epithelial precursor.

03

Precise nomenclature

Different sites and biological contexts require separate labels.

Inherited susceptibility provides biological context

Germline BRCA1 or BRCA2 mutations increase susceptibility to ovarian and breast cancer.

Hereditary-risk observations helped reveal tubal STIC lesions.

A susceptibility genotype is not itself proof of a visible precursor.

Conceptual relationship; Arrows are schematic, not measured progression

High-grade serous carcinoma: Molecular profile

Origin / precursor

A high frequency of TP53 mutations.

Alterations

High-grade tumors generally lack KRAS or BRAF mutations.

Interpretation

Genomic imbalances are frequent, including oncogene gains and tumor-suppressor losses.

Low-grade serous carcinoma is a different pathway

Origin / precursor

Low-grade tumors may arise from serous borderline tumors.

Alterations

KRAS, BRAF, or ERBB2 alterations are described.

Interpretation

TP53 mutations usually are not found in the low-grade pathway.

Low-grade versus high-grade: Preserve the distinction

Low-grade serous

Low-grade pathway: Borderline precursor; KRAS/BRAF/ERBB2; Relatively less aggressive course.

High-grade serous

High-grade pathway: Often fimbrial STIC; Frequent TP53 alteration; Aggressive dissemination.

These are distinct models, not successive grades in one obligatory sequence.

Why “serous” alone is insufficient

Anatomic location

Serous describes fluid or epithelial differentiation in different contexts.

Structure

Benign paratubal cyst, low-grade carcinoma, and high-grade carcinoma are not interchangeable.

Behavior

Biologic category must be added to descriptive terminology.

Tubal removal entered cancer-prevention thinking

Implications for surgical risk reduction

The tubal-origin model changed the rationale for surgery in high-risk individuals.

Risk-reducing salpingo-oophorectomy in BRCA-associated susceptibility.

Salpingectomy alone has also been increasingly considered for risk reduction.

An important prevention caveat

The full effect of salpingectomy-based risk reduction requires long-term observation.

The delay between intervention and typical cancer age.

The source does not supply a definitive prevention efficacy estimate.

Case 3: Precursor found at risk-reducing surgery

Diagnostic application

A BRCA1 germline mutation carrier undergoes salpingo-oophorectomy.

A focus of marked epithelial atypia is identified within the fimbrial tube.

Which source-defined lesion provides a mechanistic link to high-grade serous carcinoma?

Case 3: Interpret the precursor precisely

STIC is the source-defined intraepithelial serous carcinoma.

The finding supports the tubal-origin concept.

The case does not establish how frequently every sporadic cancer follows this pathway.

A clinical localization matrix

01

Cystic lesion

Translucent clear-fluid cyst → consider paratubal cyst.

02

Nodular lesion

Small subserosal / mesosalpinx nodule → consider adenomatoid tumor.

03

Epithelial atypia

Atypical fimbrial intraepithelial lesion → consider STIC in the proper context.

Three different meanings of “tubal”

Tubal lumen

Tubal wall

Outer serosal plane

Nearby mesosalpinx

Anatomical adjacency: A paratubal cyst lies beside the tube.

Organ wall: An adenomatoid tumor can be subserosal.

Cell of origin: High-grade serous carcinoma may arise from tubal epithelium.

Morphology, not an anatomical shortcut

First: Anatomical and morphologic localization

Tubal or adnexal location alone is not diagnostic.

Cystic versus nodular versus epithelial atypia directs interpretation.

A fully supported diagnosis requires appropriate morphology and clinical context.

Key diagnostic contrasts

01

Common benign cyst

Small, clear serous lumen,
benign tubal lining.

02

Rare benign neoplasm

Adenomatoid subserosal /
mesosalpinx nodule.

03

Malignant precursor

STIC in atypical tubal
epithelium, often fimbrial.

Question: Does serous fluid predict serous cancer?

Diagnostic application

A translucent cyst contains clear serous fluid.

The lining is benign tubal-type epithelium.

Can the adjective “serous” alone support a malignant diagnosis?

Answer: Descriptive terms are not diagnoses

No. Serous fluid or differentiation does not by itself establish malignancy.

The source categorizes typical paratubal cysts as lesions of little significance.

STIC and invasive serous carcinoma require a separate neoplastic context.

Question: Which lesion changes cancer-origin thinking?

Diagnostic application

A small benign paratubal cyst is removed incidentally.

A separate focus of marked fimbrial epithelial atypia is discovered.

Which finding is central to the tubal-origin model?

Answer: Precursor location matters

The atypical intraepithelial fimbrial lesion—STIC—is the relevant finding.

The benign paratubal cyst is not a proposed STIC precursor in this source.

Avoid causal connections that Robbins does not support.

Integrated synthesis: Benign to malignant concepts

01

Paratubal cysts

Paratubal cysts dominate the common primary benign lesion category.

02

Adenomatoid tumor

Adenomatoid tumors are rare, small, benign subserosal or mesosalpinx nodules.

03

Tubal STIC

STIC and the tubal epithelium reshape our understanding of high-grade serous carcinoma.

Reading the source critically

The core tubal-cyst passage is brief and emphasizes qualitative morphology.

The adjacent serous-carcinoma section supplies the mechanistic extension.

No source figure or whole-slide pathology image is reproduced in this deck.

Selected references

Robbins, Cotran & Kumar. Pathologic Basis of Disease. 11th ed. 2026. Chapter 22, p. 922: Fallopian Tubes; Tumors and Cysts.

Same chapter, pp. 924–925: Ovarian Tumors; Serous Tumors—pathogenesis and tubal origin.

Same chapter, pp. 925–926: STIC; low-/high-grade serous carcinoma; spread and clinical behavior.