Blood signal points to early ovarian risk

LEVEL C1


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I. WARM-UP

1. What medical tests do you think are worth doing before symptoms appear?
2. How do you weigh the benefits and risks of preventive surgery?
3. What numbers or evidence would help you trust a new test?

II. KEY VOCABULARY

precursor
something that comes before another thing and shows it may develop

lesion
an area of damaged or abnormal tissue in the body

molecule
the smallest unit of a substance that keeps its chemical nature

RNA
a type of genetic material that helps make proteins in cells

detect
to discover or identify something that is not easy to see

elevated
higher than normal

invasive
entering and spreading into healthy tissue

preventive
done to stop something bad from happening

III. READING

A blood-based molecular signal may help detect the earliest risk of ovarian cancer, shifting efforts from finding ever-smaller tumours to spotting changes before disease becomes invasive.

Writing in Nature Medicine, a team led by Rajan Gogna at the Hoag Family Cancer Institute in Newport Beach, California, examined precancerous changes that often start in the lining of the fallopian tubes.

These lesions, called serous tubal intraepithelial carcinoma (STIC), are associated with elevated blood levels of an RNA molecule known as Tu-Stroma. In the study, women with this precursor condition showed elevated levels of Tu-Stroma in blood tests.

Measuring the molecule detected STIC in 92.3% of affected women and correctly ruled out disease in 98.2% of healthy participants. Among women with inherited risk, a positive result would be accurate in about 72%, while a negative result was reported as nearly 100% reliable.

The authors said decades of screening attempts focused on tumour size, whereas this approach looks for an upstream biological warning. Co-author Esha Madan said the method could guide preventive decisions for women considering surgery to remove their fallopian tubes and ovaries.

Reading text adapted from reporting by **The Guardian***: "Molecular signal in blood helps detect...". Original article linked at theenglishwire.com.*

IV. COMPREHENSION QUESTIONS

1. Where did the researchers publish their findings?
2. Which body part is linked to the earliest changes noted in the study?
3. What RNA molecule did the team measure in blood?
4. How often did the test detect STIC and correctly rule out disease?
5. How might the findings affect decisions for high-risk women?

V. DISCUSSION

1. Should health services offer this test first to high-risk groups?
2. What would you ask before trusting a new diagnostic test?
3. How should doctors explain a 72% positive and a near-100% negative?
4. When is preventive surgery justified in your view?

VI. GRAMMAR FOCUS

Three-word phrasal-prepositional verbs

Verb + particle + preposition (come up with, put up with, look forward to). These are fixed and inseparable: the object comes after the preposition, not between the verb and its particles.

> *"Patients sometimes* **put up with** *invasive testing."*
>
> *"Researchers* **look forward to** *larger confirmatory trials."*

VII. GRAMMAR EXERCISE

Circle the correct option in each sentence.

1. Doctors could (look STIC out for / look out for STIC). _____
2. Some women may (opt out of surgery / opt surgery out of). _____
3. Teams (ran out of samples / ran samples out of) mid-trial. _____
4. The study (zeroed Tu-Stroma in on / zeroed in on Tu-Stroma). _____
5. It can be hard to (face up to the risk / face the risk up to). _____

Teacher's Notes

TEACHERS ONLY

These notes are designed to help you get the most out of this lesson. Please do not share this page with students.


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I. LESSON GUIDE

- Timing: 8–10 minutes warm-up, 10 minutes vocabulary, 12–15 minutes reading, 10 minutes comprehension, 10 minutes discussion. If used, the grammar focus can share time with comprehension.
- Pre-teach or board: fallopian tube, lesion, RNA, invasive, preventive. Check students understand terms like ovarian cancer and surgery.
- Run reading in two passes: gist, then figures and names (92.3%, 98.2%, about 72%; Tu-Stroma; STIC; Hoag; Gogna; Madan). Sensitivity: the topic involves cancer and surgery; start discussion in pairs and allow students to speak about the news, not personal histories.
- Differentiation: stronger students summarise the study's aims and limits in 3–4 sentences; others match figures to meanings (detection, ruling out, positive/negative).

II. DISCUSSION FACILITATION TIPS

1. Take a quick show of hands, then pair students with different views to compare reasons and risks.
2. Board three question types (safety, accuracy, cost) and have students add one concrete question under each.
3. Elicit simple definitions of positive/negative, then ask for plain-language examples a patient could grasp.
4. Have students first write a one-sentence rule of thumb, then test it against two scenarios from the text.

III. EXTENSION ACTIVITIES

Writing: In pairs, draft a 90-word patient leaflet explaining Tu-Stroma testing and what results mean.

Debate: Split the class: one side argues for offering the test to high-risk women now; the other argues to wait for larger trials, then rebut.

IV. ANSWER KEY OVERVIEW

Comprehension questions: short factual answers from the text.

Grammar exercise: Three-word phrasal-prepositional verbs

Discussion: open-ended. Accept any reasonable ideas supported by examples and reasoning.

Answer Key

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IV. COMPREHENSION QUESTIONS

1. Where did the researchers publish their findings?
   In Nature Medicine.
2. Which body part is linked to the earliest changes noted in the study?
   The lining of the fallopian tubes.
3. What RNA molecule did the team measure in blood?
   Tu-Stroma, an RNA molecule.
4. How often did the test detect STIC and correctly rule out disease?
   92.3% detection of STIC and 98.2% correct identification of healthy women.
5. How might the findings affect decisions for high-risk women?
   They could inform preventive choices about surgery.

V. DISCUSSION

Open answers. Accept any reasonable ideas supported by examples and reasoning.

VI. GRAMMAR FOCUS

Key point: Verb + particle + preposition (come up with, put up with, look forward to). These are fixed and inseparable: the object comes after the preposition, not between the verb and its particles. (Examples constructed.)

> *"Patients sometimes* **put up with** *invasive testing."*
>
> *"Researchers* **look forward to** *larger confirmatory trials."*

VII. GRAMMAR EXERCISE

Circle the correct option in each sentence.

1. Doctors could (look STIC out for / look out for STIC). **look out for STIC**
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4. The study (zeroed Tu-Stroma in on / zeroed in on Tu-Stroma). **zeroed in on Tu-Stroma**
5. It can be hard to (face up to the risk / face the risk up to). **face up to the risk**