

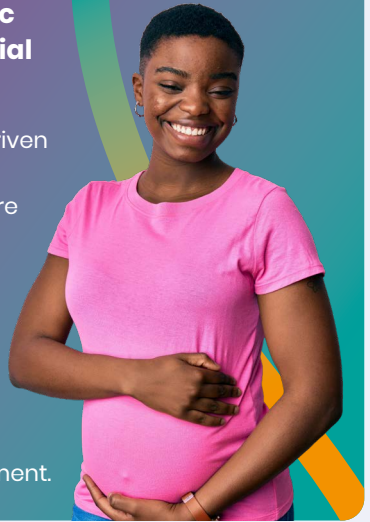
PRELI[®] test

See the endometrium clearly.
Treat with confidence.



The PRELI® test is a pioneering diagnostic based on recent advances in endometrial and implantation biology.

As the first test to measure the progesterone-driven decidual reaction, it identifies abnormal states associated with pathological implantation failure and miscarriage. These conditions often recur in natural cycles or are induced iatrogenically during ART cycles. PRELI helps identify the status of the endometrium in women experiencing reproductive challenges associated with an abnormal decidual reaction. The results may support physicians in considering personalised treatment and assessing the response to treatment.



The clinical challenge

Despite major advances in embryo assessment, a significant proportion of implantation failure and miscarriage remains unexplained.

For many fertility specialists, the endometrium remains a black box: biologically active, clinically important, but difficult to assess.

What PRELI measures

The PRELI test assesses the **decidual reaction**, a key process in mammalian reproduction. This time-sensitive, progesterone-dependent inflammatory process transforms the receptive endometrium into the decidua, an immunotolerant matrix that supports the placenta during pregnancy.

PRELI also assesses endometrial readiness for implantation and pregnancy by measuring the maturation of endometrial glands and the expansion of immunotolerant uterine natural killer cells.

Physiological vs. Pathological Implantation Failure

The decidual reaction helps prevent maternal investment in embryos that are unlikely to develop into a healthy pregnancy. This process, known as physiological implantation failure, protects the mother from investing in a non-viable pregnancy. Pathological implantation failure, by contrast, results from abnormalities in the endometrial function.

When the decidual reaction falls outside its physiological range, the risk of pathological implantation failure and miscarriage increases.

What PRELI reveals

The PRELI test identifies whether the decidual reaction is within the physiological range, stalled, or accelerated.

- A stalled decidual reaction extends the implantation window, disrupts embryo-endometrium synchrony, and destabilises the placental-decidual interface, increasing the risk of miscarriage.¹
- An accelerated decidual reaction leads to premature closure of the implantation window, increasing the risk of implantation failure.¹

The decidual reaction is regulated by progesterone. When combined with a same-day progesterone blood test, the PRELI results classify the endometrium into one of five major endometrial states:

1. **Normal:** The decidual reaction is within the physiological range.
2. **Progesterone deficiency:** The decidual reaction is stalled because progesterone levels are insufficient.
3. **Endometrial progesterone resistance:** The decidual reaction is stalled because the endometrium responds inadequately to progesterone.
4. **Progesterone excess:** The decidual reaction is accelerated because progesterone levels are excessive.
5. **Endometrial progesterone hypersensitivity:** The decidual reaction is accelerated because the endometrium responds excessively to progesterone.

The PRELI test results provide clinicians with insights that help inform personalised pre-pregnancy interventions. Treatment response can be assessed through repeat testing before embryo transfer or a subsequent pregnancy attempt.

Luteal-phase progesterone levels can be normal, high, or low, but the key issue is whether the endometrium is resistant, overly sensitive, or responds normally to progesterone.



Why this matters to your practice

PRELI® helps you:

- ✓ Identify endometrial patterns linked to implantation failure and miscarriage
- ✓ Distinguish embryo-driven from endometrium-driven causes of pathological failure
- ✓ Identify women at increased risk of miscarriage associated with a stalled decidual reaction before a subsequent pregnancy attempt
- ✓ Inform targeted, pre-pregnancy interventions
- ✓ Adjust progesterone treatment, where appropriate, and assess the decidual response with repeat testing before the next embryo transfer or pregnancy attempt
- ✓ Move beyond trial-and-error toward precision endometrial care

When the endometrium is understood, fertility care becomes more precise.

Rooted in more than 20 years of endometrial research.



Scan the QR code to read the peer-reviewed study published in Science Advances.



1. Joanne Muter *et al.*, Stalling of the endometrial decidual reaction determines the recurrence risk of miscarriage. *Sci. Adv.* **11**, eadv1988(2025)

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