

The Uterine immune profiling (UTIMPRO test) is proposed for women experiencing, one, or both of the following:

- Embryo implantation failures (no implantation despite the transfer of several embryos of good quality)
- Repeated unexplained miscarriages (more than 3 miscarriages)

The purpose of this test is to document the immune environment of the uterus during the receptive period of the cycle (i.e. when the endometrium is susceptible to allow the implantation of an embryo, or *the implantation window* during mid luteal phase). This assessment is based on the diagnosis of a local immune imbalance which may interfere with the embryo implantation. The identification of the immunological mechanisms involved is based on the quantification by molecular biology of endometrial biomarkers (specific cytokines and modulators) regulating uterine immune cells. Given these data, you may consider to modulate and personalize your patient's next treatment to counter the potential identified local immune imbalance.

**We recommend performing the biopsy on a mock cycle with estrogen and progesterone intake. The patient need at least 10 days of estrogen alone before introducing the progesterone. Also, the biopsy should be done one week after the introduction of the progesterone.** If you choose to carry out the sample on a natural cycle or with simple stimulation (FSH), the biopsy should be performed between 5 and 9 days after ovulation (or 7 to 11 days after LH surge or 8 to 12 days after the injection of ovitrelle) while monitoring the luteal phase by dosing the progesterone ( $\geq 10\text{mg / ml}$  48 hours before the biopsy). In the event of a biopsy performed on a natural cycle, please ask the patient to notify us in case her period arrives within less than 4 days after the biopsy. For patients who are followed by IVF-DO, the biopsy must be performed under a mock cycle in order to mimic the same preparation as for the transfer while respecting the same concentrations of progesterone and oestrogen. Histological dating will no longer be carried out in parallel with our test, you can carry it out at a laboratory of your choice.

We recommend performing the biopsy on a cycle without embryo transfer or attempted pregnancy. The biopsy should be avoided if the patient had a biopsy or scratching in the luteal phase of the previous cycle, if the patient had an operative hysteroscopy on the cycle or if the endometrial thickness is under 6mm. We also don't advise performing the biopsy under treatment (anti-inflammatory, heparin...) unless this treatment was recommended for the embryo transfer. An endometrial biopsy must be done while keeping the same conditions that will have the embryo transfer. We recommend to inform the patients to drink 30 min before the biopsy in order to fill their bladder, this facilitates the introducing of the pipelle.

#### Modality to prepare the sample to send

- Fill in the information form and the consent form

All the procedure should be performed with gloves to avoid RNA degradation:

- Fill in the white stick-on label with the patient's name and date of birth
- Stick the label on the tube containing the RNA later
- Perform classically the endometrial aspiration with the Cormier pipelle
- Place your biopsy on a sterile pad (not furnished) to discard mucus and blood
- Place the endometrial biopsy in the labelled vial containing the RNA later, then in the little plastic bag, then in the box for transport. 30 to 50 mg of endometrial tissue are sufficient

In the supplied pre-labelled envelop with the address of Matricelab in Creteil, place

- The box for transport
- The information form
- The consent form
- A copy of serology(less than one year old)

You may then send the sample at room temperature if shipment is made immediately afterwards. Alternatively, the sample can be kept in the fridge for one week until the moment of shipment- the sample can then be shipped at room temperature. For shipment during the summer, it is recommended to add an ice pack or to send within 24h hours.

**We cannot proceed biopsies from patients whom serologies are positive for HIV, hepatitis B (Ag HBs, Ac HBc and Ac HBs) and hepatitis C.** Cost of immune uterine profiling is 500 euros (500euros for EU countries- 510euros for non-EU countries). Upon receipt of your patient's sample, and only after making sure that the RNA extraction is successfully done, we will contact the patient via E-mail to send the invoice. Then we will proceed to the real time PCR.

Results will be sent by email under 2 weeks from the date of the biopsy receipt. We will detail the immune mechanism if a deregulation is diagnosed as well as the options of personalization to counteract the deleterious disequilibrium.

You can visit our website for further explanation (address below): <http://www.matricelabinnove.com/>

**Contact:**

Tel:+33 6.41.67.46.25 (Monday to Friday: 9:00 a.m to 12:00a.m)-Mail : matricelab@gmail.com

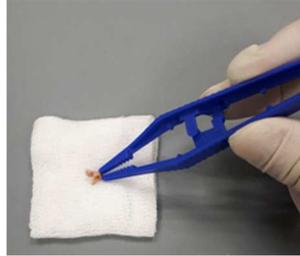
Address : MatriceLab Innove, Pépinière Bio&D, 94 av du Général de Gaulle, 94000 Créteil FRANCE

## Outlines for sending the endometrial samples



**Incomplete data lead to delayed treatment of the patient's sample  
(Telephone, Email, Serology less than 1-year, Clinical information ...)**

**1<sup>st</sup> step**



Perform the biopsy 5 to 9 days after the beginning of progesterone (mock cycle).  
Take 1 cm of the endometrium

**2<sup>nd</sup> step**



Immerse the biopsy in the tube. **Close the tube securely**

**3<sup>rd</sup> step**



- 1) **Write on the label**  
NAME (same on tubes and document), First name, Date of birth
- 2) **Stick the label on the tube (not on the bag nor on the box) and place the tube in the plastic bag with its absorbent paper** (following the packing instruction P650 ONU 3373)

**4<sup>th</sup> step**



**Matricelab Innove**



**Fill in and/or sign for each sample:**

- The Information Form
  - The Consent Form
  - The Medical Prescription form
- + a copy of negative serology -1year old**

**N.B: please do not forget to write down the patient's telephone number and email as well as your email.**

The report will be sent within 3 weeks from the day of the receipt of the biopsy and the complete file.

