Costs

Overview of the costs for analyzing your endometrial biopsy:

- Uterine natural killer cells: 125,60 €
- Uterine plasma cells: 125,60 €
- Combined analysis: 221,48 €

Shipping and handling charges may apply.

Contact
Reprognostics GbR
Gaiser - Kuon - Toth
CUBEX 41
Universitätsmedizin Mannheim, Haus 41
Theodor-Kutzer-Ufer 1-3
68167 Mannheim

Prof. Dr. Timo Gaiser
Senior Physician, Head of Molecular Pathology and Immunohistochemistry
Pathology Institute
University Medical Center Mannheim

PD Dr. Ruben Kuon
Specialist in Gynecology and Obstetrics
Department of Gynecological Endocrinology and Fertility Disorders
University Hospital Heidelberg

Prof. Dr. Bettina Toth
Head of the Department for Gynecological Endocrinology and Reproductive Medicine
Medical University of Innsbruck

Dipl.-Biol. Maja Weber
Biologist
Reprognostics GbR

Please contact us:
info@reprognostics.com
www.reprognostics.com

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Dear patient,

"Which diagnostic can help to have a successful pregnancy?" We are often confronted with this question as reproductive physicians. It is not easy to answer, as the topic "getting pregnant" contains many variables: in addition to sperm and oocyte, the uterus, the endocrine system and many other factors play a role.

The physicians at your fertility center or your gynecologist informed you today about the possibility of diagnosing immune parameters in your endometrial biopsy. This can be done without anesthesia by removing a few cells of the uterine lining (endometrium).

After this the endometrial biopsy is shipped in our laboratory and analyzed with the help of a specific technique which allows to visualize individual cells in a tissue (immunohistochemistry). By using specific antibodies, uterine natural killer cells (CD56-positive) or plasma cells (CD138-positive) can be displayed and their tissue abundance is evaluated.

**Uterine natural killer cells (uNK cells)**

uNK cells are immune cells that play an important role in both the second half of the cycle (luteal phase) and in early pregnancy. They are called "killer" cells due to their ability to target viruses and bacteria as well as tumor cells.

By contributing about 70% of immune cells in the first trimester of pregnancy at the fetomaternal interface, the uNK cells represent the most significant population of all immune cells. Results of international studies on "uterine natural killer cells and pregnancy" show conflicting results. Overall however, an increasing body of evidence suggests that an elevated number of uNK cells may have a negative impact on implantation and pregnancy.

![Figure 1: CD56-immunohistochemistry (positive uNK cells appear brown); A: normal count of uNK cells; B: elevated count of uNK cells](image1)

**Uterine plasma cells**

Uterine plasma cells accumulate in the endometrium in the setting of chronic inflammation. Chronic inflammation may present without any symptoms or can be marked by irregular bleedings, pelvic pain or increased vaginal discharge. Plasma cells can be detected by immunostaining with the antibody CD138.

![Figure 2: CD138-immunohistochemistry (positive uterine plasma cells appear brown); A: normal count of plasma cells; B: elevated count of plasma cells](image2)

After analyzing more than 8,000 endometrial biopsies and performing scientific studies on uNK cells, approximately 30% of women with recurrent implantation failure (RIF) or recurrent miscarriage (RSA) show an increase of uNK cells. Further, elevated plasma cells are detected in about 10-15% of patients with these fertility disorders.

You find further information on therapeutic options on our website www.reprognostics.com. Your doctor will inform you about the result of your endometrial biopsy and an individual therapy will be explained.

We wish you all the best,

Prof. Dr. Timo Gaiser  
PD Dr. Ruben Kuon  
Prof. Dr. Bettina Toth  
Dipl.-Biol. Maja Weber