

# Optimizing Endometrial Receptivity in IVF – A Qualitative Survey Study

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## INTRODUCTION

Suboptimal uterine receptivity is believed to be a major factor behind IVF failure, after excluding for embryonic factors. Evidence on current clinical tests of endometrium including endometrial receptivity analysis (ERA), uterine (uNK) and peripheral (pNK) natural kill cells is controversial. We examined the current pattern of use of these tests amongst fertility specialists in Australia and New Zealand.

ERA is a molecular test that profiles the transcriptome of 238 genes, classifying endometrial biopsies into proliferative, pre-receptive, receptive and post-receptive stages. uNK cells are evaluated using monoclonal antibodies by immunohistochemical (IHC) staining of endometrial tissue or flow cytometry. pNK cells are measured in blood by flow cytometry.

## METHODS

A prospective 23-item web-based survey was distributed by email, via the Fertility Society of Australia (FSA), to fertility specialists between August and October 2020. Data was collected and analyzed using Qualtrics. Institutional ethics approval was obtained.

## RESULTS

91 fertility specialists completed the survey. ERA (52.8%) was most commonly ordered, followed by uNK (39.6%) and pNK (13.2%). For all tests, the most common indication was recurrent implantation failure (RIF) (85.4, 61.1, 50.0%). Of those that did not offer the tests, the main reasons cited were insufficient evidence for the test (58.8, 77.4, 76.1%) and unavailability of the test (27.5, 6.5, 8.0%). A majority of specialists (62.2%) had refused a patient request for endometrial testing, where 27.5% of clinicians had ordered a test due to patients request. Furthermore, 33.3% of specialists offered empirical immunological treatment for RIF in the absence of abnormal results. The most common agents were antiplatelets (26.2%), anticoagulants (26.2%) and corticosteroids (23.4%).

## DISCUSSION

Findings from this study indicate the lack of reliable clinical tests and the urgent need for further research on endometrial receptivity. Fertility specialists need evidence for both the use of endometrial testing, as well as immunological treatments in women suffering from RIF. This is particularly important as patients may request such tests or treatments, even when the indication is not clear.

TABLE 1 – Reasons to order/not order Endometrial Tests

