

# The impact of adenomyosis and co-existing endometriosis on IVF/ICSI outcomes

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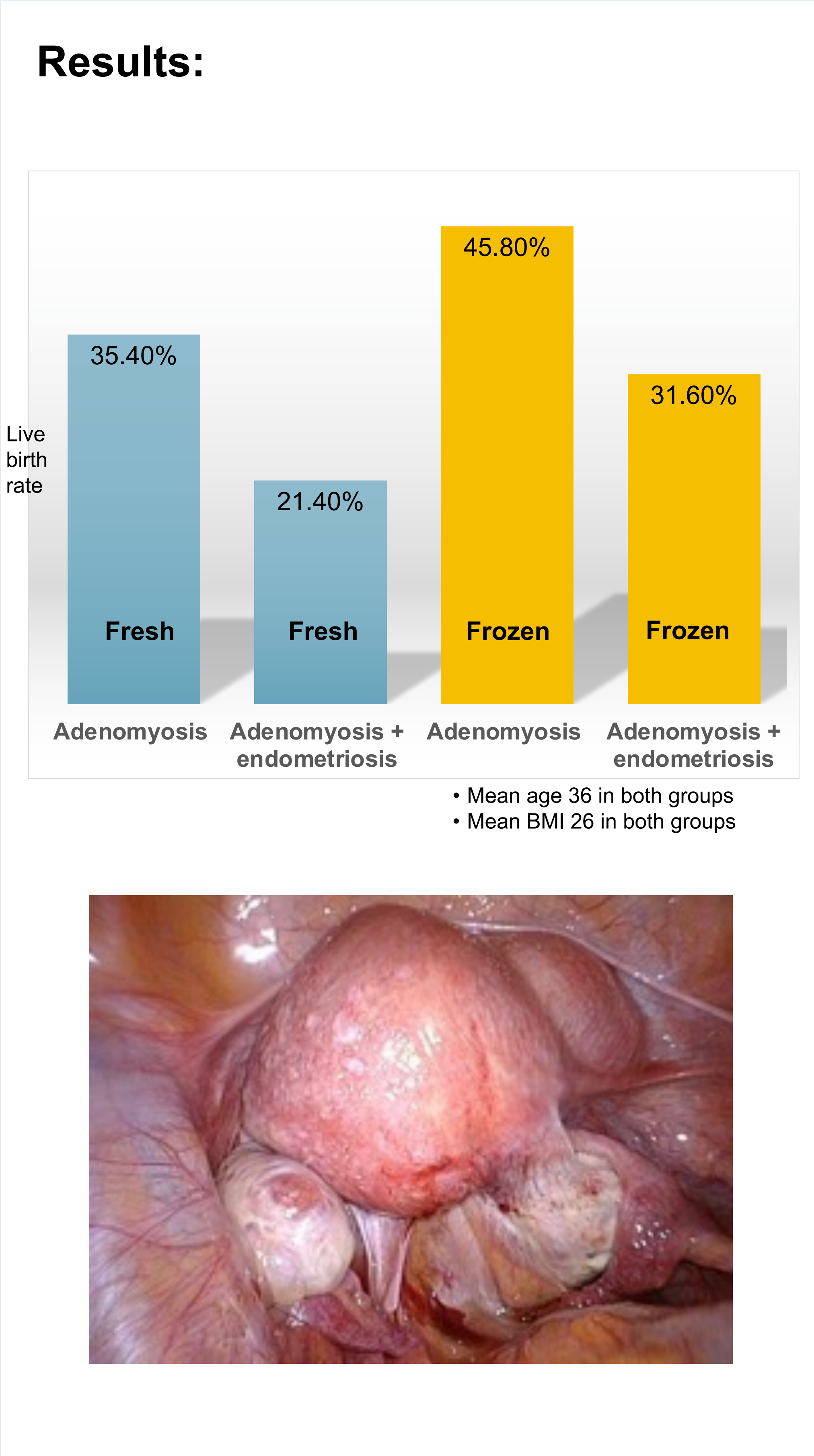
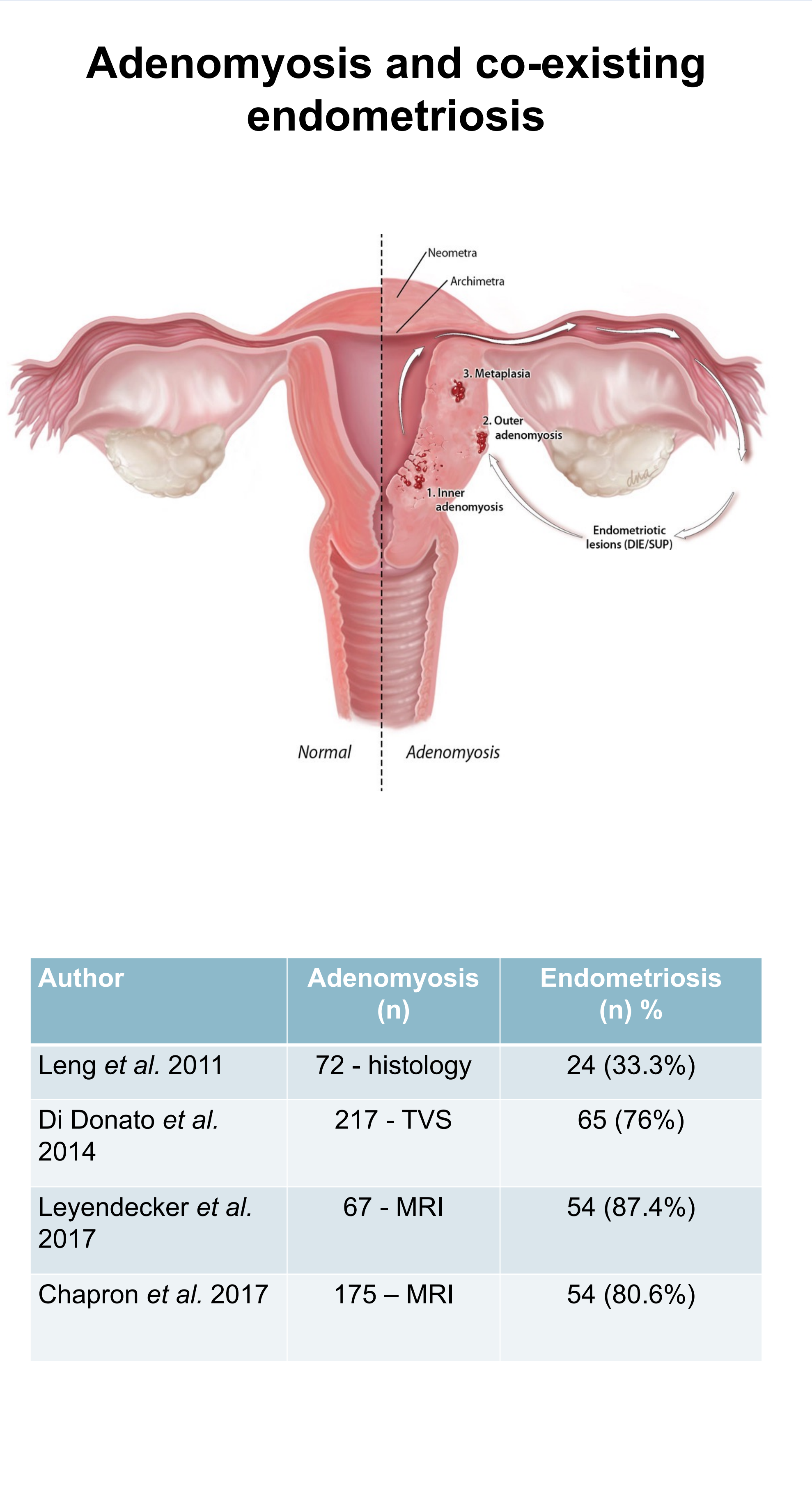
**Study question:** In women undergoing assisted conception do women with both endometriosis and adenomyosis have worse outcomes compared to those who have adenomyosis alone?

**What is known already:** Adenomyosis and endometriosis often co-exist and independently reduce chances of success in women undergoing assisted conception.

**Study aim:** This study aims to investigate the reproductive outcomes of women with adenomyosis and co-existing endometriosis.

**Study design:** Retrospective observational cohort study between September 2018 - 2021 of infertile women diagnosed with adenomyosis (n = 43 women) and adenomyosis with co-existing endometriosis (n = 23 women) who underwent fresh IVF/ICSI cycles (n = 62).

**Methods:** Adenomyosis was diagnosed by transvaginal sonography and scored as previously described (1). Endometriosis was diagnosed by ultrasound or laparoscopy and scored according to revised ASRM criteria. Demographic data and reproductive outcomes were recorded.



**Results:** There were a total of 105 cycles, 62 fresh IVF/ICSI and 43 frozen. Mean age was 36 years for both adenomyosis alone and those with both endometriosis and adenomyosis.

**Results:** Compared to women with adenomyosis alone, women with adenomyosis and co-existing endometriosis having a fresh transfer had a lower livebirth rate (17/48 [35.4%] vs 3/14 [21.4%]) (p = 0.259). Livebirth rate was higher in women with adenomyosis alone and in those with both adenomyosis and endometriosis when undergoing frozen transfer vs. fresh (11/24 [45.8%] vs. 17/31 [35.4%].) (p=0.259) and (6/19 [31.6%] vs. 3/14 [21.4%]) (p=0.264).

**Conclusions:** There was lower livebirth rate in women with both endometriosis and adenomyosis vs. those with adenomyosis alone. Frozen embryo transfer appears to give better outcomes.

There is a need for a large prospective study evaluating the benefit of frozen embryo transfer in women who have adenomyosis with and without co-existing endometriosis to confirm our findings.