**Supplemental Data**

**Supplemental Figure 1**

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**Supplemental Figure 1 Sox9 staining of endometrial organoids.** **A** Immunofluorescent staining for Sox9 (green) and epithelial marker E-cadherin (magenta) on endometrial organoids exposed to stepwise estradiol and testosterone applications to mimic the 14-day follicular phase of a normal menstrual cycle was done. **B** Quantification of %Sox9+ cells in endometrial organoids (25 organoids obtained from 3 patients) is shown. **C** A frequency histogram illustrates that the majority of organoids do not contain Sox9 positive cells.

**Supplemental Figure 2**

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**Supplemental Figure 2 – FOXA2 staining of endometrial epithelial cells.** Immunohistochemistry for FOXA2, glandular epithelial marker was done on endometrial organoids.