cell-free DNA concentration is correlated with the value of molecular characteristics for individualised preoperative management.

Methodology A single university based centre prospective study including all consecutive women undergoing surgical management for EC. All patients with EC underwent transvaginal ultrasound examination, molecular tumour characterisation and determination of cell-free DNA (cfDNA) quantities from peripheral venous blood samples. cfDNA was extracted from 1 mL of plasma using ccfDNA/RNA Kit and diluted in 20 uL of distilled H2O. cfDNA concentration was determined through the use of the High Sensitivity DNA Chip/2100 Bioanlyser, Agilent and was represented in ng/mL plasma. Results Fifty-nine women were included in the final analysis. The median age of women was 69 years (range 41–84). There were 2 women with POLEmut tumours, 20 with MMR deficiency, 9 with p53 mutated and 28 with NSMP tumours. None of the classical ultrasound characteristics (deep myometrial invasion, cervical stromal invasion, tumour vascularity, tumour volume or diameter) were statistically significantly different between different molecular subtypes. Considering cfDNA concentration, there was significant positive correlation between ultrasound assessment of myometrial invasion (%) and cfDNA concentration ($r=0.317$, $p=0.002$) and largest tumour diameter ($r=0.284$, $p=0.036$). There was also a statistically significant difference in cfDNA concentration when tumour invaded cervical stroma (median 5.6; range 0–41 vs. 7.5; range 6.4–13.3; $p=0.05$). The difference in cfDNA concentration between highly vascular tumours (Doppler score 3 or 4) and poorly vascular tumours (Doppler score 1 or 2) was not statistically significant (median 5.6; range 0.6–39 vs. 7.4; range 0.3–28.4; $p=0.06$) Conclusion cf-DNA concentration measured before starting management of endometrial cancer is correlated with tumour size and local spread of tumour as assessed by ultrasound. There is no correlation between classical ultrasound parameters of endometrial cancer and the currently used molecular classification.

Disclosures Nothing to disclose.