Human papillomavirus (HPV) is the most common sexually transmitted infection. It can cause serious health problems such as warts, carcinoma of vulva, vagina, cervix, penis, anus and oropharynx or recurrent respiratory papillomatosis and some cutaneous diseases. There are over 200 types of HPVs. HPV 16 and 18 cause about 70% of cervical cancers. HPV 6 and 11 cause about 90% warts. There are over 120 types of HPVs, distributed in two genotypes: low-risk HPVs and high-risk HPVs. HPV typing is important in the management of cervical cancer. The most frequent oral HPV is HPV-16. The main indication for HPV testing is the screening of women for cervical cancer. The median age of women was 69 years (range 41–84). There were 2 women with POLEmut tumours, 20 with MMR deficient, 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 a 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 0–28.4; 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.

#848 CELL-FREE DNA CONCENTRATION IS CORRELATED WITH ENDOMETRIAL CANCER SIZE AND SPREAD EVALUATED BY ULTRASOUND

Jure Knez*, Andrej Cokan, Andrej Dovnik, Maja Pakiž, Iztok Takac, Tomaz Budenfeld, Uršo Potonik, Monika Sabocan. University Medical Centre Maribor, Maribor, Slovenia; Faculty of Medicine, Maribor, Slovenia

Introduction/Background To establish the correlation between ultrasound characteristics of endometrial cancer (EC) and 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 Bioanalyzer, Agilent and was represented in ng/mL plasma.

Results Seventy women were included in the final analysis. The mean age of women was 69 years (range 41–84). There were 2 women with POLEmut tumours, 20 with MMR deficient, 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 a 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 0–28.4; 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.