

Abstract EP225/#828 Table 2 Anaesthesiological and surgical parameters

	PDS (n=181)	IDS (n=89)	P-value
Duration of surgery (minutes)	280 (220; 330)	240 (180; 293)	<0.001
Peritoneal cancer index (points)	19 (13; 23)	12 (6; 16)	<0.001
Rectosigmoid resection	122 (67.4%)	35 (39.3%)	<0.001
Tumor residuals (mm)			0.294
0	129 (71.3%)	65 (73.0%)	
<5 mm	19 (10.5%)	9 (10.1%)	
5-10 mm	11 (6.1%)	9 (10.1%)	
11-19 mm	7 (3.9%)	0 (0%)	
>= 20 mm	15 (8.3)	6 (6.7%)	
Intraoperative estimated blood loss (ml)	500 (338; 700)	500 (300; 700)	0.745
Blood transfusion intraoperatively	39 (21.5%)	38 (42.7%)	<0.001
Patients admitted to ICU	165 (91.2%)	81 (91.0 %)	0.814
LOS in ICU (days)	1 (1; 2)	1 (1; 1)	0.175
LOS hospital (days)	15 (12; 20)	13 (10; 18)	0.016
Blood transfusion postoperatively	67 (37%)	45 (50.6%)	0.024
Clavien-Dindo classification			0.090
0	70 (38.7%)	42 (47.2%)	
I	7 (3.9%)	5 (5.6%)	
II	70 (38.7%)	31 (34.8%)	
IIIa	10 (5.5%)	2 (2.2%)	
IIIb	16 (8.8%)	9 (10.1%)	
IVa	5 (2.8%)	0 (0%)	
IVb	2 (1.1%)	0 (0%)	
V	1 (0.6%)	0 (0%)	

Data are shown as median (25%; 75%) quartiles or as n (%) patients.

P-values calculated using the exact Wilcoxon-Mann-Whitney test or the exact Fisher test in contingency tables as appropriate.

LOS: Length of stay, ICU: intensive care unit.

transfused intraoperatively (PDS 21.5% vs. IDS 42.7%,  $p < 0.001$ ). PDS pts had higher fluid demands of crystalloid [4500 ml (3500;5000) vs. 4000 ml (3000;4500),  $p = 0.015$ ] and colloid infusions [2000 ml (1500;2000) vs. 1500 ml (1000;2000),  $p = 0.003$ ], whereas other hemodynamic characteristics like highest heart rate, lowest arterial pressure, norepinephrine requirements, highest lactate level, or the amount of urine output were comparable. Table 2 demonstrates further anaesthesiological and surgical parameters.

**Conclusion/Implications** In comparison to PDS the IDS showed intraoperatively lower fluid but higher transfusion demands and was not associated to a reduced stay in ICU. The hemodynamic characteristics did not show any benefits neither. These data indicate that IDS is similarly associated to a high impact on the anaesthesiological and ICU management.

EP226/#560

#### VOC ANALYSES IN PLASMA SHOW HIGH SENSITIVITY TO DISTINGUISH OVARIAN CANCER PATIENTS FROM HEALTHY CONTROLS

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**Introduction** Ovarian cancer (ovarian-/tubal-/peritoneal cancer) give dull symptoms why early diagnosis is challenging.

Endogenous Volatile Organic Compounds (VOC) are products of metabolic activity in cancer and elevated glycolysis leads to increases in lactate, fumarate, and other metabolites. VOC analyses in plasma and urine have shown to indicate early cancer.

**Methods** With highly sensitive gas sensors, preoperative plasma from 87 women with stage I-IV ovarian cancer was examined and compared to that from 26 healthy control women. Data analyses were performed using feature extraction from 32 gas sensors per sample. The dataset has been processed by principal component analysis (PCA) for dimensionality reduction and feature reduction (9 principal components were kept retaining 95% of the original information in the features-observations dataset). A support vector machine model was then trained towards algorithmic binary classification: positive (cancer) or negative (no cancer). To avoid overfitting while not losing any observations, 5-fold cross validation was used during training of the classification algorithm.

**Results** The analysis of VOCs revealed positive results in 85 out of 87 ovarian cancer patients, yielding a sensitivity of 97.7% (95% confidence interval [CI] 91.9 – 99.7%). Out of the healthy controls 22 were negative and 4 showed positive results (specificity 84.6% 95% CI 65.1 – 95.6%). Positive predicted value 95.5% (95 CI: 88.9 - 98.8%) and accuracy of 94.7% (95% CI: 88.8 - 98.0%).

**Conclusion/Implications** VOC analyses in plasma show very high sensitivity to distinguish ovarian cancer patients' stage I-IV from healthy controls.