**gynaecological cancers**

**904P SIMILARITIES SUGGEST A SHARED EMBRYOLOGIC ORIGIN FOR PANCREATIC AND OVARIAN MUCINOUS TUMORS**


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**Aim:** Mucinous ovarian tumors (MOT) are among the rarest epithelial ovarian tumors. Their cell of origin is still unknown. Recently, whole-exome sequencing studies highlighted molecular similarities between MOT and mucinous cystic neoplasms (MCN) of the pancreas. We questioned commonalities between these seemingly disparate tumors and its significance.

**Methods:** Clinical characteristics of a series of 287 MOT and 23 MCN were compared. Immunohistochemical (IHC) expression of 7 proteins (CK7, CK20, MUC2, CDX2, PAX8, β-catenin and SMAD4) was analyzed in 21 MOT and 16 MCN. Microarray datasets (Affymetrix HU133) of 6 MCN, 8 MOT, 70 epithelial (non mucinous) ovarian tumors and 6 primordial germ cells (PGC) were obtained from previously published studies.

**Results:** In our series, MCN occurred only in women, mainly young (<54 years), with similar characteristics to MOT patients (p = 0.12). Both MCN (37%) and MOT (57%) patients tended to be or have been smokers (p = 0.1). MOT and MCN tumors showed similar IHC profile and were more likely to be CK7+ CK20-MUC2-CDX2-. Unsupervised clustering of the different datasets is ongoing and will be presented at the ESMO annual meeting.

**Conclusions:** Clinical, morphological and molecular similarities between MOT and MCN suggest a common pathogenesis, potentially a shared precursor such as embryologic rests of PGCs that transiently stop in the pancreatic buds during early development in the human embryo.

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