THE CORRELATION BETWEEN MACROSCOPIC SURGICAL ASSESSMENT, HISTOLOGICAL AND MOLECULAR SUBTYPES OF HIGH-GRADE SEROUS CANCER OF THE FEMALE GENITAL TRACT, OVARIAN, TUBAL AND PERITONEAL ORIGIN - THE FOOTPRINT STUDY

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Introduction/Background
High Grade Serous Carcinoma (HGSC) of the female genital tract can be divided into Four molecular subtypes (C1, C2, C4 and C5) by RNA sequencing. In addition to distinct expression profiles, the molecular subtypes also display distinct clinical features. To date, there is also no published data that relates to molecular subtype and tumour macroscopic appearance at the time of primary surgery as described by the surgical team.

Aims-
1. To explore the possible correlation between the macroscopic appearance of HGSC at the time of primary surgery and molecular subtype.
2. Evaluate pre-surgical MRI scans to determine if there are subtype-specific characteristics that can be observed.
3. To validate the histopathologic classification criteria of molecular subtyping for HGSC.

Methodology
Prospective, exploratory pilot study of patients undergoing primary surgery for HGSC. Pre-operative MRI was assessed for PCI scores and lesions characterisations by a dedicated radiologist. Intra-operatively- cases underwent surgical assessment including PCI & Fagotti scores, lesions characterisation and operative findings. Tumour samples were collected and sent to molecular subtyping using the RNA-seq platform, as well as Histopathological assessment to predict the molecular subtype, by a dedicated blinded pathologist.

Abstract #824 Figure 1

Results
Eighteen cases of HGSC were included in this study, with 48 samples. All molecular subtypes were represented in our patient population. Intra-operative photos show distinct features of the different subtypes (to be presented at the talk).

Conclusion
This pilot study suggests that different molecular subtypes of HGSC have different lesion appearance and disease spread, and potentially be predicted by the surgeon to guide clinical management.

FIRST EXPERIENCE WITH INTRA-ABDOMINAL 224RADIUM-LABELLED MICROPARTICLES (RADSPHERIN) AFTER CYTOREDUCTIVE SURGERY FOR PERITONEAL METASTASIS IN RECURRENT EPITHELIAL OVARIAN CANCER (PHASE 1 STUDY)

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Introduction/Background
Recurrent disease after secondary cytoreductive surgery for ovarian cancer (OC) is frequent. Radsperin is a novel alpha-emitting therapy. Alpha particles have high linear energy transfer and a radiation range < 100 μm (3–10 cell diameters), generating highly effective radiation with non-repairable double-strand DNA breaks in affected cells, killing micrometastasis and free-floating tumour cells after surgical resection, and reduced risk of toxicity compared with beta or gamma radiation.

Methodology
Here we report on the phase 1 study (NCT03732768) evaluating the recommended dose and safety of Radsperin in patients with a secondary R0 resection of platinum-sensitive recurrent epithelial OC. Radsperin is injected intraperitoneally two days after surgery. Dose escalation was performed at 1–2–4–7-MBq. Safety interim analysis after completion of the dose-limiting toxicity (DLT) period is presented here.

Results
14 patients were enrolled in the dose escalation cohort. Median age was 66 (56–77). Median peritoneal cancer index was 7 (3–16). The 7MBq dose was selected as recommended dose as no DLT was observed. A total of 91 adverse events (AEs) were reported, where 98% were grade 1 or 2 and only 2 were grade 3. Three grade 1 AEs in two patients were reported as possibly related to both Radsperin and CRS (night sweats, fatigue). Randomisation was performed to avoid bias. Six serious AEs were reported (compression fracture, ileus, paralytic ileus, small intestinal obstruction, intestinal obstruction), according to the investigator not related to Radsperin, but three were related to surgery. One grade 2 event of procedural complication (leakage during administration) was reported as SAE because being medically important. No complications have been identified during follow-up of the patient.

Conclusion
All dose levels were well tolerated, DLT was not reached and the highest dose of 7MBq was selected for the expansion cohort. No deaths occurred and only one SAE related to Radsperin administration was reported.

Disclosures
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