## IGCS19-0266

### 79 PRE-BRACHYTHERAPY MAGNETIC RESONANCE-BASED 3D TUMOR VOLUME EVALUATION FOR OUTCOME PREDICTION IN CERVICAL CANCER PATIENTS TREATED WITH DEFINITIVE CHEMORADIATION

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**Objectives** To report the impact on survival of residual tumor volume (RTV) prior to brachytherapy (BT) initiation determined by magnetic resonance imaging (MRI) in patients treated for locally advanced cervical cancer with definitive chemoradiotherapy (CRT).

**Methods** MRI examinations were prospectively performed in patients with advanced cervical cancer (Stages IB2-IVA) after CRT completion and prior to BT initiation. RTV was delineated on each T2-weighted slice and volumetry was derived on the treatment planning system. All patients received external beam radiation (EBRT) with concomitant Cisplatin followed by volume-based BT planning. Cumulative EBRT and BT doses were calculated as the total equivalent dose in 2 Gy fractions (EQD2). Potential prognostic factors were selected based on non-parametric tests and then analyzed for survival with a Cox regression model.

**Results** Median post-therapy follow-up was 27.4 months (range, 3–57.8). Thirty-seven patients were included. According to the FIGO classification, 8% were stage IB, 75% stage II, 11% stage III, and 6% stage IV. Overall survival was 86.5%. Of the patients evaluated, 29.7% had complete remission on pre-BT MRI and 18.9% were considered having local failure or distant disease. At bivariate analysis, RTV >2 mL, D90 CTV-HR <84 Gy and excessive treatment time were all predictors of poor overall survival. At multivariate regression analysis, only RTV persisted as a significant prognostic factor with survival rates of 95.8% and 69.2% for pre-BT RTV ≤2 mL and >2 mL respectively (p=0.005).

**Conclusions** Our preliminary data suggest that pre-BT RTV >2 mL is a predictor of poor survival.

## IGCS19-0195

### 80 SMARCA4 INACTIVATION DEFINES A SUBSET OF UNDIFFERENTIATED UTERINE SARCOMAS WITH RHABDOID AND SMALL CELL FEATURES AND GERMLINE MUTATION ASSOCIATION

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**Objectives** A rare subset of aggressive *SMARCA4*-deficient uterine sarcomas (*SMARCA4*-DUS) has been recently proposed, with only a limited number of cases having been previously described. Since potential targeted therapies exist for *SMARCA4*-defficient tumors, we sought to validate and expand the clinicopathological and molecular features of *SMARCA4*-DUS.

**Methods** A retrospective database search of a large, CLIA-certified and CAP-accredited, reference molecular laboratory was performed for clinically advanced uterine sarcomas with genomic profiles that contained *SMARCA4* mutations. Clinicopathological data were extracted from patient records Morphological and molecular features were centrally reviewed.

**Results** Here, we identify and describe the clinicopathological and genomic features of 17 additional cases of *SMARCA4*-DUS. Median patient age was 51 years (range 33–70). Most tumors were aggressive with distant metastasis. *SMARCA4*-DUS demonstrated predominantly rhabdoid or large epithelioid cells with abundant cytoplasm, but also had varying degrees of small cell and spindle cell morphology. Tumors were microsatellite stable and exhibited no other or only few co-occurring genomic alterations by comprehensive genomic profiling. We discovered one patient, who developed *SMARCA4*-DUS at age of 55, had a germline *SMARCA4* mutation, whose daughter had previously died of small cell carcinoma of the ovary, hypercalcemic type (SCCOHT), at the age of 32.

**Conclusions** Our data support the notion that *SMARCA4* inactivation is the driver oncogenic event of a morphologically and molecularly distinct form of uterine sarcoma. Identification of *SMARCA4*-DUS may be clinically important due to their aggressive behavior, germline association and emerging targeted therapies.

# Poster Discussion with the Professor Station 2

## IGCS19-0473

### 81 ATTITUDE TOWARDS AND FACTORS AFFECTING UPTAKE OF POPULATION BASED BRCA TESTING IN ASHKENAZI JEWS: A COHORT STUDY

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**Objectives** To evaluate the factors affecting interest, intention, uptake, and attitude towards unselected population-based *BRCA*-testing in the Ashkenazi Jewish (AJ) population.