analysis of cancer. The aim of Arcagen is to generate a database integrating clinical and molecular information of patients (pts) with rare cancers.

Methods: The first part of Arcagen is a restrospective feasibility cohort of pts with sarcoma, thymic cancer, rare ovarian or head and neck cancers with previously collected tumour samples available, from any stage. Molecular analysis was performed using FoundationOne CDx for all histologies but sarcoma were FoundationOne Heme was used. Clinical data including demographic data, medical history, treatment and survival data were collected.

Results: Eighty-seven pts from 3 centres were screened, molecular data was successfully obtained for 75 pts which were included for the analysis (failure rate 14%). 41 pts were diagnosed with sarcoma (19 myxofibrosarcoma, 22 undifferentiated pleomorphic sarcoma), 9 with ovarian germ cell cancer, 14 with rare head and neck cancer and 11 with thymic cancer. The median age at diagnosis was 64 (range 19-85). Most pts had reportable genomic alterations (89%). The mean tumor mutational burden was low, 4.19Muts/MB (range 0-14). In the sarcoma cohort the most frequent alterations were TP53 (n = 25), ATRX (n = 8), CDKN2A/B (n = 7) and RB1 (n = 7). In the ovarian germ cell cohort, 5 pts (55%) had no reportable genomic alterations, KRAS and ARID1A mutations were found in 2 cases. In the thymic cancer cohort, HRAS, ASXL1 and BRAF mutations were found in 2 pts. In the head and neck cohort the most frequent alterations were TP53 (n = 10), ARID1A (n = 4) and ERBB2 (n = 3, 2 mutations, 1 amplification). Overall, 35 pts had druggable molecular alterations, including 4 pts for which the treatment is approved for their disease.

Conclusions: In our rare tumour cohort, 47% presented clinically relevant genomic alterations. Further molecular analysis of rare tumours is needed. Prospective recruitment in Arcagen is ongoing, using the EORTC SPECTA platform. We aim to recruit a total of 1000 pts with rare tumours with different histologies in order to further understand the biology of these tumours and improve pts survival.

Legal entity responsible for the study: EORTC.

Funding: Roche.

Disclosure: J-Y. Blay: Honoraria (self), Research grant / Funding (self): Roche-Genentech. All other authors have declared no conflicts of interest.

82P Arcagen: An EORTC-SPECTA project to perform a molecular characterization of rare cancers: Results of the retrospective feasibility cohort

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Background: Rare cancers are defined as cancers with an incidence of < 6/100,000/ year. They are under-represented in the research programs including molecular