TPS623 **Poster Session**

Short-term pre-operative durvalumab (MEDI 4736) in early small triple-negative breast cancer patients (POP-Durva).

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Background: Pathological response to neoadjuvant immune checkpoint inhibitors (ICI) is associated with excellent survival in several tumor types. In Stage II-III triple negative breast cancer (TNBC), neoadjuvant anti-PD-(L)1 with chemotherapy improves pathological complete response (pCR) and reduces recurrence. In Stage I TNBC, (neo)adjuvant chemotherapy remains standard of care. Exceptional responses to ICI in TNBC have been observed, suggesting a subgroup of Stage I TNBC could be treated with ICI alone; however, biomarkers to select patients are lacking. **Methods:** Trial Design: POP-Durva (NCT05215106) is a prospective, single-arm phase II trial evaluating pCR after two doses of durvalumab in Stage I TNBC. Patients with untreated clinical stage I ($\leq$2cm, N0) TNBC (ER $<$ 10%, PR $<$ 10%, HER-2 non-amplified) with sTIL of $\geq$ 5% will be included. Study treatment consists of two doses of durvalumab 10mg/kg IV, on D1 and D15. On completion of study treatment, patients will undergo breast US and will proceed to surgery, or standard neoadjuvant treatment, per physician preference. Fresh tissue biopsy and Formalin-Fixed Paraffin-Embedded (FFPE) will be collected at screening, on D22 or at surgery; blood will be collected for PBMC and ctDNA at screening, D1, D15 and on D22; faecal specimen collection will occur at baseline and at end of treatment (for microbiota analysis). Trial Endpoints: The primary endpoint is pCR (ypT0/is ypN0). In patients who proceed directly to surgery following durvalumab, pCR will be assessed at surgery. Patients with residual invasive disease at the D22 biopsy who receive further neoadjuvant therapy will be considered non-pCR for the primary endpoint. With an expected pCR rate of 20%, a sample size of 195 patients provides a 95% confidence interval of a precision of 6.2%. The secondary objectives are ORR and safety. The key exploratory objective is to identify biomarkers of response to ICI. Spectral cytometry, single-cell RNA and TCR sequencing will be performed to describe on-treatment immune cell dynamics and to identify mechanisms of response to ICI monotherapy. Imaging-mass cytometry will characterise tumour-immune cell spatial interactions. Microbiome profiles will be correlated with response. 4 sites in France are actively recruiting; as of 27/01/2025, 35 patients have been treated. Clinical trial information: NCT05215106. Research Sponsor: None.