Results

**Background and Aims**

- Brain tumors are common in patients with MM; present in 20% of patients at time of stage IV diagnosis and occurring in up to 50% of patients at some point during their treatment.
- Patients with brain tumors often have low or undetectable ctDNA in plasma despite detectable ctDNA in CSF, indicating the role of the blood brain barrier in releasing tumor DNA into the circulation.
- BRAF/NRAS ctDNA at baseline and on-ICI therapy predicts objective response (OR) and overall survival (OS) in melanoma patients receiving ICI therapy without brain mets.
- Progression free survival (PFS) and OS.

**Methods**

- Intracranial and extracranial disease volume (sum of product of diameters of ALL mets).
- Intracranial and extracranial RECIST response.
- Partial response, PR (OR); stable disease, SD; progressive disease, PD.
- Progression free survival (PFS) and OS.

**Results**

- Plasma ctDNA does not appear to be a useful biomarker for detecting brain mets nor monitoring brain response in melanoma patients receiving ICI.
- This has important implications when using ctDNA in the setting of surveillance in both the metastatic and adjuvant setting.
- Undetectable ctDNA at baseline and on-therapy was associated with superior overall survival, indicating survival is largely determined by extracranial disease activity and response to treatment.

**References**