

Gregory Group

- Cancers grow when the rate of proliferation of tumour cells **outpaces** their rate of cell death
- Remarkably, cell death by **apoptosis** is most common in the most aggressive tumours
- Dying tumour cells can generate **pro-oncogenic**, “reparatory” signals
- Apoptosis can:
 - promote **proliferation**
 - **activate** tumour-associated macrophages (TAM) M1-> M2-like
 - stimulate **angiogenesis**
 - promote **metastasis**
 - **suppress** anti-tumour immunity
- **Extracellular vesicles** produced by apoptotic tumour cells (**Apo-EVs**) have oncogenic properties
- Apoptotic tumour cells and Apo-EVs are rich sources of **biomarkers**
- Readily detectable in **liquid biopsies**
- Uses in **early cancer detection**, staging and disease monitoring

Tissue repair and regeneration responses driven by cell death in the tumour microenvironment

