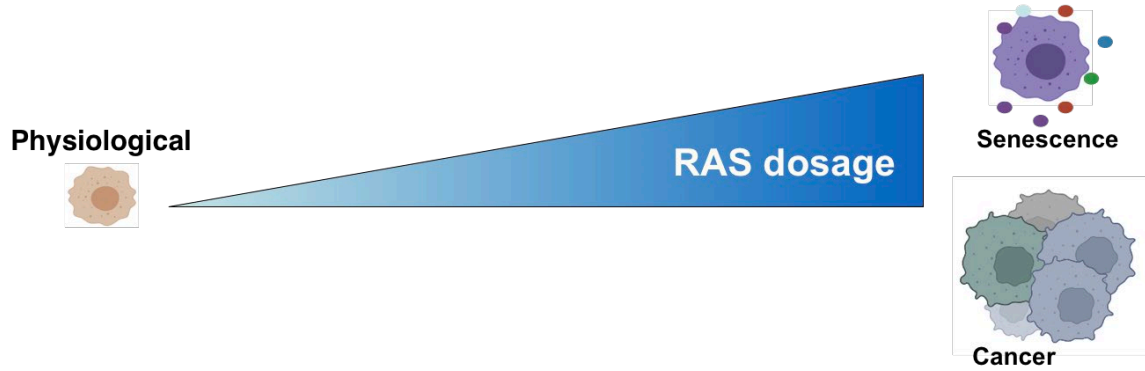


Oncogene Dose Heterogeneity in Senescence and Immune Surveillance of Premalignant Cells

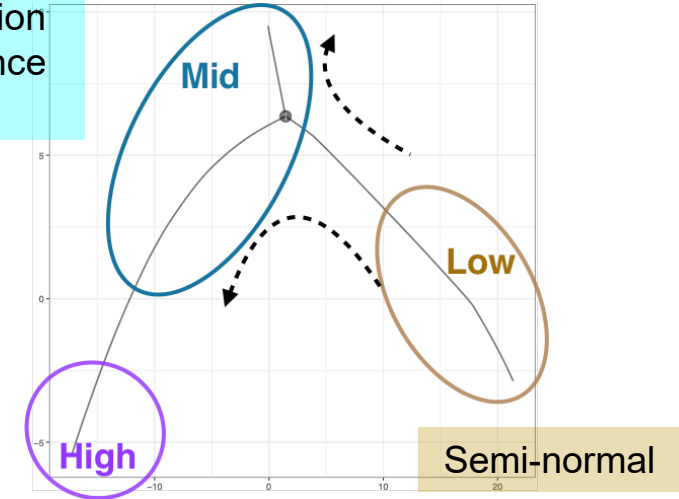
Adelyne Chan, Haoran Zhu, Liam Cassidy, Andrew Young, Shwethaa Raghunathan, Matthew Hoare, Tim Halim, Masako Narita and Masashi Narita

High dose RAS is required for both senescence and cancer



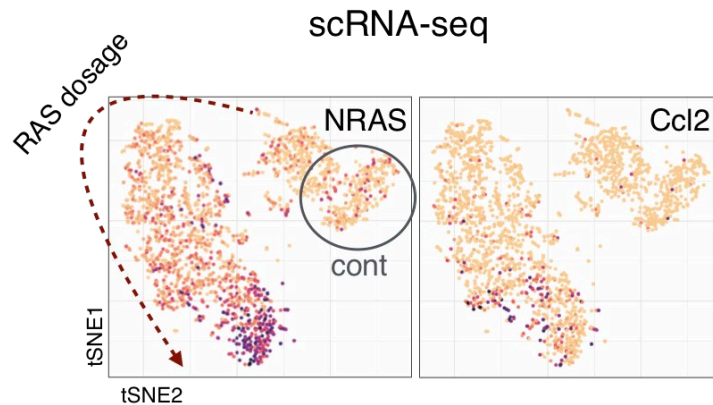
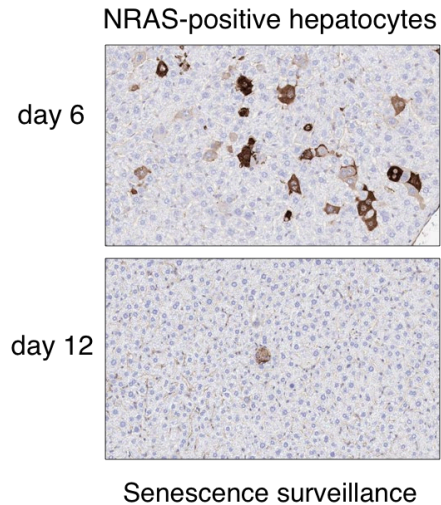
Non-linear response to increasing RAS dose in **cell fate decisions** and **tumorigenic potential**

- Progenitor gene expression
- Evade immune surveillance
- Tumour-prone



- Strong senescence
- Immunogenic

Model of liver senescence introduces heterogeneity in RAS dose at single-cell level



Open Questions

1. Mechanism of non-linearity
2. Validation human samples and other models of RAS dose-dependency
3. Non-cell autonomous effects e.g. on immune populations