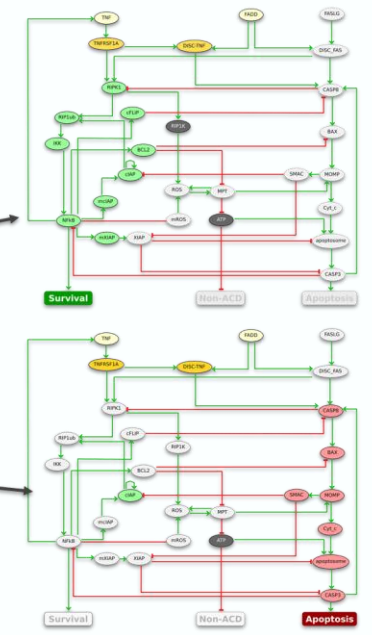
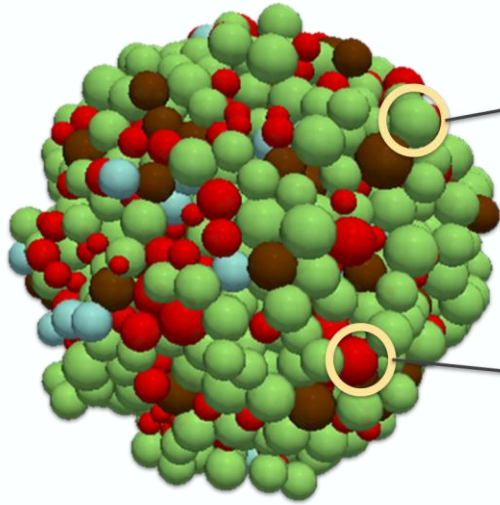


# HPC workflow compartmentalises a multiscale simulation aimed at the personalisation of COVID-19 treatments and facilitates its scalability

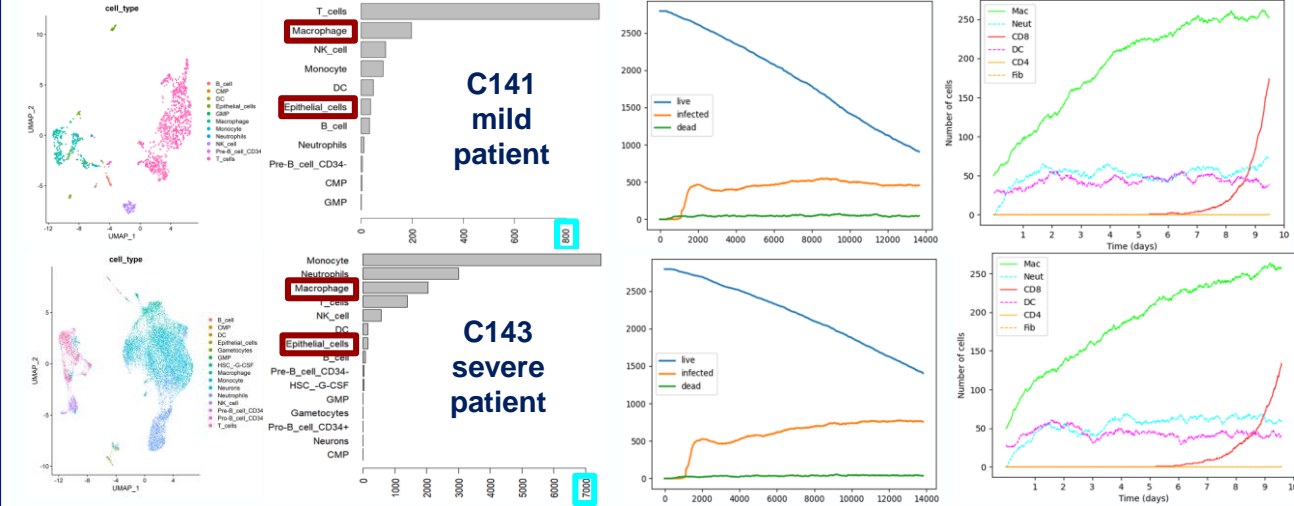
## PhysiBoSS: agent-based + Boolean model

- Cell Cycle Phase**
- Premitotic
  - Postmitotic
  - Ki67 negative
  - Apoptotic
  - Necrotic
  - Necrotic (swelling)
  - Necrotic (lysis)
- Time scales**
- $-\Delta t_{diff} / \Delta t_{mech} / \Delta t_{cell}$
  - $-\Delta t_{signaling}$

Different cell signaling states



## Patient-specific mechanistic exploration of COVID-19 infection



## Workflow management for HPC

