Discussion & Thoughts: Assays and Interpreting CMI responses

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What have we learned about COVID-19 vaccine-induced CMI responses?

• Critical ( & underexplored) dimension of vaccine immunity

  ➢ Particular importance in context of vaccine efficacy against viral Variants of Concern

  ➢ Special importance in the context of immunosuppressed Individuals (discordance with Ab response e.g. in B cell depletion, chemo etc)

  ➢ Added potential in the context of heterologous vaccination approaches

How can we better standardize CMI assays? What assays are needed?

**Standardisation**
- Need for increased standardisation and validation of CMI assays (e.g. learn from other programmes, e.g. influenza, HIV)
- Analogous initiatives to standardisation of humoral immune responses: e.g. Do we need a COVID-19 International T cell Standard (WHO, CEPI, NIBSC)?
- Common standardised set of tools (e.g. peptide pools), reagents and protocols

**Assays**
- Quantitative vs qualitative analysis
- Large trials vs early phase
- Targets/Epitope mapping/understanding immunodominance
- Role for IGRA?
- Elispot assays
- Flow-based intracellular cytokine staining/polyfunctionality
- Distinction natural immunity vs vaccine response
Thank you for your attention!