Positive & negative immunomagnetic selection
• Antibodies bind to cell surface antigens

• Magnetic dextran-iron particles

• Separation in magnetized column
Positive selection

Steps 1–4: Mix excess primary antibody with magnetic secondary antibody.

Steps 5–9: Incubate and remove excess primary antibody.

Step 10: Add clinical sample.

Step 15: Target is enriched.

Steps 11–14: Incubate and wash to remove contamination.

Steps 16 and 17: Perform amplification directly on the bead substrate, resulting in target genomic DNA ready for high-throughput sequencing.
Negative selection

Diagram:
- Magnetic colloid
- Tetrameric antibody complex
- Neutrophil
- Neutrophils (unwanted cells bind to column)
- Magnet
- Needle
- Eosinophils

• Immunomagnetic selection can be used on
  – Blood samples
  – Pleural fluid
  – Cultured cells

• To detect
  – PBMCs
  – Cancer cells etc.
Thank you for your attention!