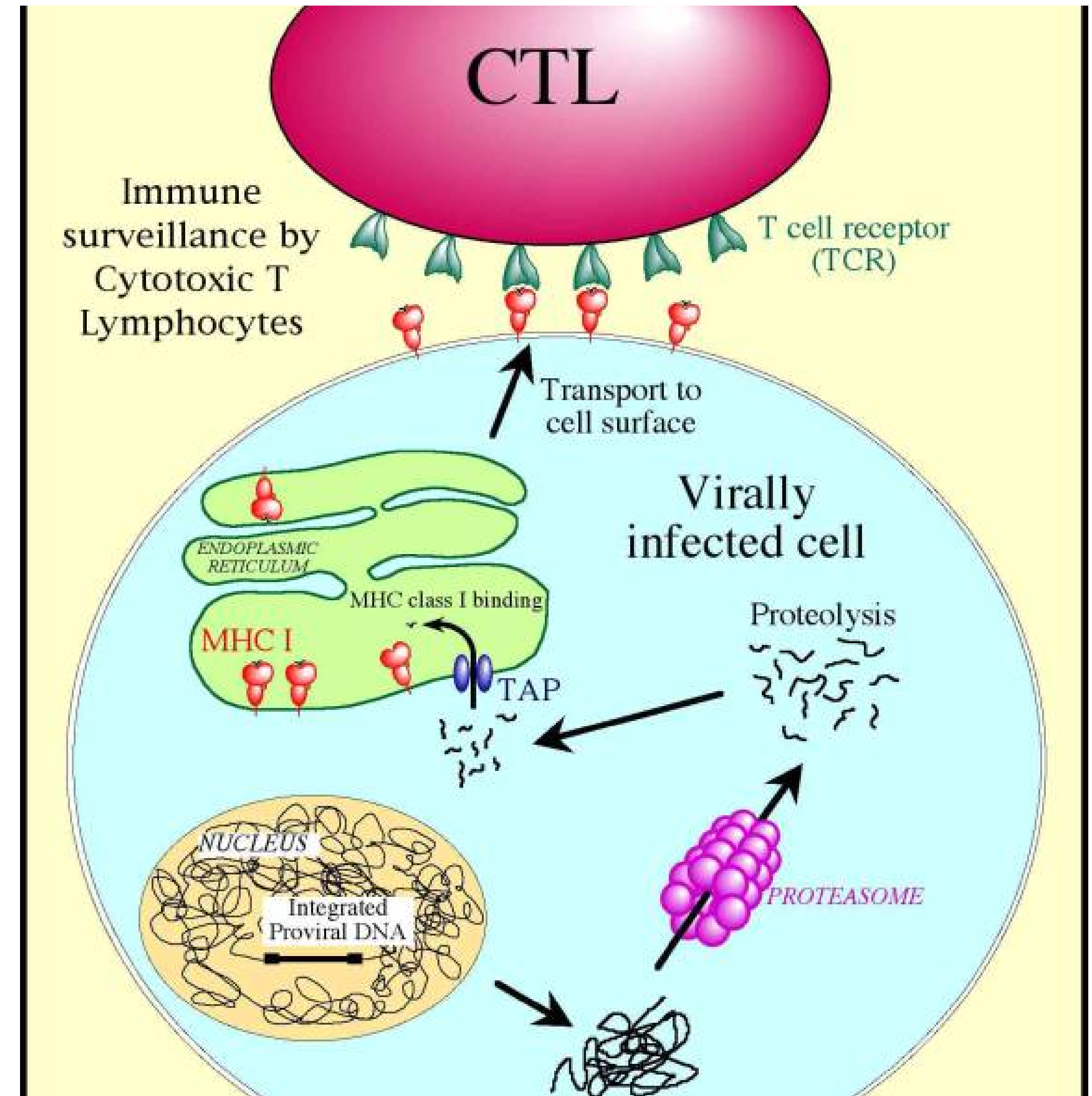


## Example: MHC-restricted CTL killing of infected cells

- Cytotoxic T-lymphocytes effect cell-mediated immune response
- Foreign (e.g., viral) proteins are cleaved by the proteasome, transported by TAP and loaded onto the MHC Class 1 molecule.
- MHC Class 1 presents a restricted polypeptide (epitope) on the surface of the cell.
- A CD8+ cell binds to presented foreign peptides via a T cell receptor (TCR) and initiates infected cell apoptosis.



# MHC Class 1 Molecules

- Present **linear** foreign peptides which are most commonly 9 or 10 aminoacids long
- Anchor sites (2 and 9) are usually important for binding and recognition
- Mutations which alter the peptide can hinder or prevent CTL response activation

