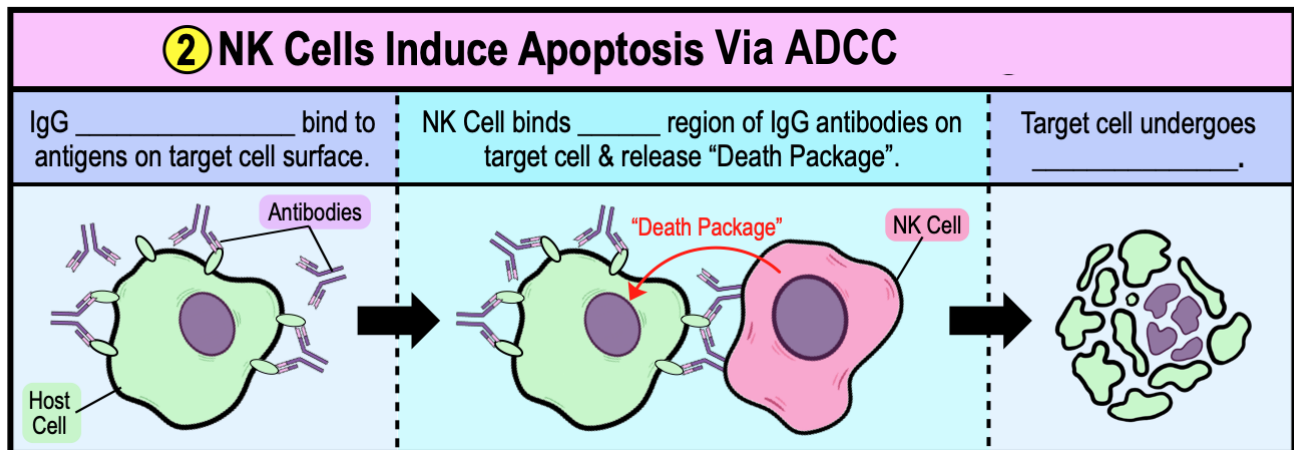
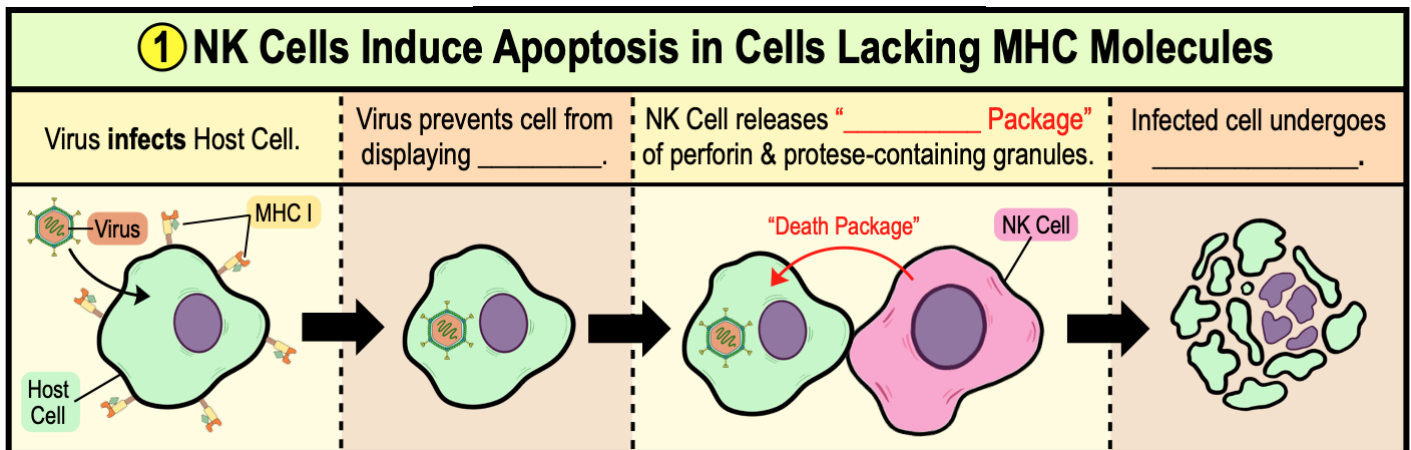


CONCEPT: NATURAL KILLER CELLS

- **Recall: Natural Killer Cells (NKs):** *innate lymphocyte cells* that do _____ have *specificity* in antigen recognition.
 - Role of NK cell is to destroy *infected* host cells by recognizing *irregular* patterns on host cell _____.
 - NKs release *perforin* & other *protease-containing* granules to induce _____ of the infected host cell.
- NK cells recognize one of 2 *irregular* patterns on infected host cells:
 - 1) Lack of MHC class _____ on the infected host cell (some viruses interfere with antigen presentation).
 - 2) NKs respond to Fc region of IgG antibodies bound to surface of infected host cell, leading to **ADCC**.



PRACTICE: What is the main difference between natural killer cells & T cytotoxic cells?

- Natural killer cells do not need to be activated to target & kill infected host cells, but T cytotoxic cells do.
- T cytotoxic cells do not need to be activated to target & kill infected host cells, but natural killer cells do.
- T cytotoxic cells bind to antibodies on the surface of host cells & natural killer cells do not.
- Natural killer cells are a part of the adaptive immune response & T cytotoxic cells are innate lymphocytes.

CONCEPT: NATURAL KILLER CELLS

PRACTICE: Certain viruses have evolved to be able to avoid detection by cytotoxic T cells. These viruses remove the MHC class 1 molecules from the surface of the cell that they are infecting. This ensures that the cytotoxic T cells do not bind to the infected cell and kill the cell and the virus within. Which immune cell is specifically designed to recognize these types of viral threats?

- a) CD4 effector cells.
- b) T helper cells.
- c) Regulatory T cells.
- d) Natural killer cells.
- e) CD8 effector cells.

PRACTICE: How are natural killer cells able to kill infected host cells?

- a) NK cells bind to IgG antibodies on the infected cell's surface and send apoptosis signals to the infected cell.
- b) NK cells send perforin and protease granules to the infected cell triggering apoptosis of the infected cell.
- c) NK cells bind to antigens on the infected cell's surface and send signals triggering apoptosis of the infected cell.
- d) NK cells mark infected cells for destruction and the infected cell will later be destroyed by cytotoxic T cells.
- e) A and B.
- f) C and D.
- g) D only.
- h) All of the above.