## Antibody-Drug Conjugates (ADCs)

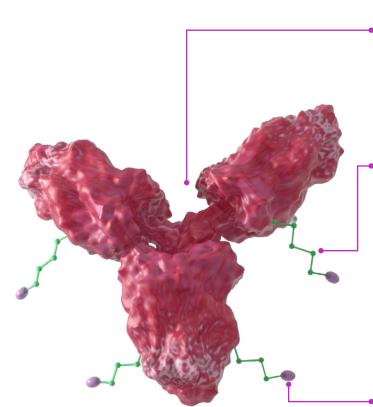
## What are ADCs?

Antibody-drug conjugates (ADCs) are a **precision-based** cancer therapy that combines the **targeting ability** of monoclonal antibodies with the **cell-killing** power of potent therapeutics.<sup>1</sup>

ADCs deliver drugs **directly** to cancer cells, minimizing damage to healthy tissue and reducing side effects.<sup>1,2</sup>

## Structure and mechanism of action

ADCs consist of three critical components:



**Monoclonal antibody:** A specialized antibody that recognizes and binds to specific markers (antigens) found on the surface of cancer cells.<sup>1,2</sup>

**Linker:** A stable chemical connector that attaches the drug (payload) to the antibody. It ensures that the drug is only released once the ADC is inside the cell.<sup>1,3</sup>

Payload: A medicine designed to destroy the cancer cell once inside, also called a warhead. These can include optimized cytotoxic payloads and novel small molecule payloads like an immune agonist, small molecule inhibitor or a protein degrader.<sup>1,2</sup>

When an **ADC** binds to its target, it forms an **ADC**-antigen complex which is taken into the cell. The linker then **releases the payload inside**, killing the cancer cell from within.<sup>1,3</sup>

## ADCs in precision cancer treatment



ADCs are part of the diverse toolbox of modalities at Bristol Myers Squibb that are **matched to a molecular mechanism** of action to achieve the best possible results for patients. They are a rapidly developing and promising drug modality where recent technical progress has propelled the field forward.



ADCs have helped to **enhance the standard of care** in breast cancer and are being expanded into new, difficult-to-treat indications. These are in hematology and solid tumors, including acute myeloid leukemia, non-small cell lung cancer, ovarian cancer and endometrial cancer, among others.



They are also being explored **in combination** with other modalities, such as immunotherapies and molecularly targeted therapies, in synergistic ways to improve outcomes.

Bristol Myers Squibb is working to bring these transformational medicines to patients faster by:

- Building on a deep understanding of causal human biology to advance the science of antigen targeting to improve foundational targets and uncover new ones
- Expanding on the types of payloads delivered to cells
- Collaborating with other experts to advance the most promising ADCenabling technology

Precision-based approaches to cancer treatment, including ADCs, have the potential to meet the needs of the many patients awaiting new, efficacious and tolerable therapies. By following the science

2. National Institutes of Health. (2022). Monoclonal antibodies: Precision cancer therapy. Retrieved from https://www.nih.gov/

and embracing a multifaceted approach, Bristol Myers Squibb aims to rapidly advance these transformational therapeutics to patients.

National Cancer Institute. (2021). Antibody-drug conjugates for cancer treatment. Retrieved from https://www.cancer.gov/about-cancer/treatment/research/adcs

news-events/nih-research-matters/monoclonal-antibodies-precision-cancer-therapy

3. U.S. Food & Drug Administration (FDA). (2020). Antibody-drug conjugates in oncology: An evolving therapeutic option. Retrieved from https://www.fda.gov/drugs/resources-information-approved-drugs/antibody-drug-conjugates-oncology