

Category

Best Biotechnology Product

Drug / Device Name

ADCETRIS

Compound/ Tech Name

brentuximab vedotin

Trade Name

N/A

Date of Approval

2018-03-20

Indications

ADCETRIS (brentuximab vedotin) is a CD30-directed antibody-drug conjugate (ADC) cancer treatment approved across seven indications in the United States:

- Pediatric patients 2 years and older with previously untreated, high-risk classical Hodgkin lymphoma, in combination with doxorubicin, vincristine, etoposide, prednisone and cyclophosphamide. (2022)
- Adult patients with previously untreated Stage III/IV classical Hodgkin lymphoma in combination with doxorubicin, vinblastine, and dacarbazine. (2018)
- Adult patients with previously untreated systemic anaplastic large cell lymphoma or other CD30-expressing peripheral T-cell lymphomas, including angioimmunoblastic T-cell lymphoma and peripheral T-cell lymphoma not otherwise specified, in combination with cyclophosphamide, doxorubicin, and prednisone. (2018)
- Adult patients with primary cutaneous anaplastic large cell lymphoma or CD30-expressing mycosis fungoides who have received prior systemic therapy. (2017)
- Adult patients with classical Hodgkin lymphoma at high risk of relapse or progression as post-autologous hematopoietic stem cell transplantation (auto-HSCT) consolidation. (2015)
- Adult patients with classical Hodgkin lymphoma after failure of auto-HSCT or after failure of at least two prior multi-agent chemotherapy regimens in patients who are not auto-HSCT candidates. (2011)
- Adult patients with systemic anaplastic large cell lymphoma after failure of at least one prior multi-agent chemotherapy regimen. (2011)

Therapeutic Categories

Oncology, cancer, Hodgkin lymphoma

Attached Files:

- FDA Approval of ADCETRIS in Frontline Stage 34 Hodgkin Lymphoma.pdf

Background information and need for drug/device

Classical Hodgkin lymphoma most commonly occurs in teens and young adults, with 8,800 cases diagnosed each year in the U.S. It is a shocking diagnosis for seemingly healthy young people who are

just starting out their lives. When caught early, Hodgkin lymphoma is considered one of the more treatable blood cancers. However, if cancer spreads to the lungs, liver, bone marrow or many lymph nodes (advanced or Stage III/IV), long-term survival is less certain.

For more than 40 years, there were no significant new treatments. Most patients were subject to a cocktail of harsh chemotherapies with unpredictable and sometimes fatal side effects, such as lung toxicity from bleomycin. Up to 30 percent of advanced-stage patients experienced disease progression after initial treatment, contributing to a great need for better options.

When approved in 2018, ADCETRIS became the first FDA-approved regimen in frontline advanced classical Hodgkin lymphoma in more than 40 years, and the combination eliminated bleomycin. Six-year follow-up data presented last year showed a remarkable 41% reduction in risk of death compared to a prior standard of care in adults with advanced classical Hodgkin lymphoma – a transformative, unsurpassed benefit that can profoundly impact lives of these young patients, offering a potential cure to many. Improvement in overall survival has rarely been shown in frontline treatment of this disease, making the results truly groundbreaking for young patients with their whole lives ahead of them.

Approximately 113,000 patients worldwide have been treated with ADCETRIS since its commercial launch in 2011. Kaitlynne, diagnosed at 17, says “My Hodgkin lymphoma was very aggressive. The biggest accomplishment of ADCETRIS, in my eyes, is the number of patients who have been positively affected by it, giving them more life to live.”

Attached Files:

- About Hodgkin Lymphoma.pdf
- FDA Approval of ADCETRIS in Frontline Stage 34 Hodgkin Lymphoma.pdf

History of the development of the drug/device

ADCETRIS' origin lies in Seagen's conviction. The field of antibody-drug conjugates was littered with failures; but for 13 years, Seagen scientists doggedly pursued a cancer treatment that combined specificity, stability and potency while reducing toxic side effects.

Seagen scientists were steadfast in their persistence, testing more than 30 technologies. When satisfied, they deliberated about which patients could benefit most. A researcher recalled hearing about young patients with a rare blood cancer that didn't always respond well to chemotherapy. With its ADC research, Seagen hoped to replace part of a cytotoxic chemotherapy regimen that had been used for years in CD30-expressing lymphomas with something more targeted and potentially more tolerated.

“Our goal was to come up with a completely different type of delivery agent, drug warhead, and new linker that would allow a drug to remain bound to an antibody for as long as possible before reaching a cancer cell,” said Peter Senter, Ph.D., Seagen Vice President and Distinguished Research Fellow.

ADCs are designed to directly kill cancer cells while minimizing damage to healthy ones.

The trailblazing approach signaled a new era of targeted cancer therapy. ADCETRIS has dramatically changed treatment of Hodgkin lymphoma and certain other CD30-expressing blood cancers, opening new areas of research with novel therapies to further reduce traditional short- and long-term effects of

toxic chemotherapies from frontline regimens. Building from Seagen's pioneering research, ADCs are now among the fastest-growing drug classes in oncology, combining the precision targeting of monoclonal antibodies with highly potent cancer killing agents.

ADCETRIS has received three breakthrough designations for different indications, moving from a post-transplant palliative treatment to the front-line setting in 2011, to significantly increasing overall survival for patients as a frontline treatment for advanced Hodgkin lymphoma today. Today, ADCETRIS is approved in more than 70 countries.

Attached Files:

- ADC MOA video.mp4
- Seagen History.pdf

Why this drug or device is innovative, the broad implications for future research, and/or how it will improve the human condition

Last year, ADCETRIS became the first and only targeted therapy inclusive regimen in the frontline setting to improve overall survival in patients with advanced Hodgkin lymphoma. The trial is one of only two frontline randomized studies in advanced stage Hodgkin lymphoma to show an overall survival advantage. Six-year follow-up data from the pivotal ECHELON-1 trial showed a statistically significant 41% reduction in the risk of death vs. previous standard of care chemotherapy.

The overall survival data represent the largest survivability gain in history for patients with advanced-stage Hodgkin lymphoma and a major step forward in cancer research.

ADCETRIS was recently classified in national treatment guidelines as a Category 1 preferred agent in frontline advanced Hodgkin lymphoma based on these groundbreaking overall survival data and is a foundation of care in certain CD30-expressing lymphomas.

While it's not the industry's first antibody-drug conjugate, ADCETRIS' revolutionary, proprietary linker technology set a foundation for future powerful antibody-drug conjugate medicines across a broad range of cancers including bladder cancer, cervical cancer, diffuse large B-cell lymphoma, breast cancer and other cancers. Today, approximately one-third of FDA-approved and marketed ADCs use Seagen technology.

Now, antibody-drug conjugates are being investigated in combination with other agents such as immune therapies and bispecific antibodies. Currently, there are more than 500 active clinical trials involving more than 140 unique antibody-drug conjugates. And since 2018, there has been a threefold increase in industry deal volume for antibody-drug conjugate-related assets.

Hodgkin lymphoma survivor Ethan best summed up the impact: "Just when I was losing hope, I found a treatment that changed my life. Not only did ADCETRIS get me into remission, but it also restored my hopes of living a cancer-free life."

Attached Files:

- ADCETRIS ECHELON1 Overall Survival Press Release.pdf
- NCCN Hodgkin Lymphoma Guidelines.pdf

Please provide appropriate references (ie Pubmed links)

<https://pubmed.ncbi.nlm.nih.gov/35830649/>

SM Ansell et al. Overall Survival with Brentuximab Vedotin in Stage III or IV Hodgkin's Lymphoma. N Engl J Med 2022; 387:310-320. DOI: 10.1056/NEJMoa2206125.

<https://pubmed.ncbi.nlm.nih.gov/29224502/>

JM Connors et al. Brentuximab Vedotin with Chemotherapy for Stage III or IV Hodgkin's Lymphoma. N Engl J Med 2018; 378:331-344. DOI: 10.1056/NEJMoa1708984

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- [nejmoa2206125.pdf](#)
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