



# ASCO Annual Meeting 2024: Breakthrough Treatments Hint at Renewed Hope for Patients and Investors

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*In June, the American Society of Clinical Oncology (ASCO) hosted its 60th Annual Meeting, drawing over 40,000 attendees from around the globe. The conference is the premier oncology event of the year, showcasing clinical readouts on the most promising innovations in cancer diagnosis and treatment.*

*Advances in cancer care often require extensive time to demonstrate benefits to patients, gain approval, and achieve widespread acceptance within the medical community. This year's event largely focused on validating revolutionary treatment categories like Chimeric antigen receptor (CAR) T-cell therapies and antibody drug conjugates (ADCs). Given proven clinical benefits across a wider array of cancer types, we expect these novel treatment categories to become increasingly important in the fight against cancer and the growth profiles of select companies in the healthcare space.*

## Key Takeaways

- As medical companies leverage the power of artificial intelligence, genomics, and other groundbreaking discoveries, the boundaries between technology and healthcare continue to blur, presenting potential opportunities for both patients and investors.
- CAR-T therapies are moving beyond the blood cancer niche and are showing promise in fighting solid tumors, potentially expanding their use to a much broader patient population.
- Antibody drug conjugates could also have tremendous growth potential, given the benefits they appear to offer over traditional chemotherapy.

## CAR-T Cell Therapies: Cracking the Code to Target Solid Tumors

The CAR-T space has come a long way since the U.S. Food and Drug Administration (FDA) approved the first CAR-T treatment in 2017. There are now six commercially available CAR-T therapies, all approved for the treatment of blood cancers, which account for approximately 6% of all cancer cases.<sup>1,2</sup> However, data presented at ASCO hint at the potential for CAR-T therapies to succeed in solid tumors, an area that has historically seen muted results.

CAR-T therapies are a newer treatment modality in cancer care. CAR) T-cell therapy is a genetically engineered way to get immune cells – a type of white blood cell – to fight cancer by changing them in the lab so they can find and destroy cancerous cells. This approach has been widely successful in blood cancers, often presenting a curative option. Aided by expanded opportunities in solid tumors and [autoimmune disorders](#), the CAR-T treatment sector is expected to achieve \$20 billion in 2030 sales, up from \$3.7 billion in 2023.<sup>3</sup>

### AstraZeneca's "Armored" Approach Proves Successful in Early Studies

Early clinical data from AstraZeneca and partner AbelZeta showed their investigational treatment for liver cancer helped shrink tumors in half of participants.<sup>4</sup> At the highest evaluated dose levels, 75% of patients saw tumor shrinkage.<sup>5</sup> Patients that responded to the treatment saw their tumors shrink by at least 30%.<sup>6</sup> Across all dosing regimens, the treatment seems well tolerated with a reasonable side effect profile.

CAR-T therapies have historically had difficulty penetrating solid tumors, even when genetically modified to specifically target cancer cells, as solid tumors can develop savvy techniques to evade the immune system. AstraZeneca's approach relies on "armored" CAR-T cells, which strengthens the immune system to infiltrate the difficult solid tumor environment and attack cancerous cells.



The treatment's early success positions AstraZeneca well in the race to the first approval of a solid tumor CAR-T therapy. The firm is currently recruiting for a phase 2 trial, which it hopes will show similar results in a larger patient population. If successful, it could open the door for this life saving technology to a wider pool of cancer patients.

## ADCs: Paving the Way for Cancer Treatment Without Traditional Chemotherapy

Antibody drug conjugates (ADCs) have been the hot topic in the cancer space in the last year and ASCO was no exception.

ADCs are a relatively new class of drugs that uses a targeted antibody to deliver chemotherapy precisely to individual cells. ADCs are empowered antibodies designed to harness the targeting ability of monoclonal antibodies by linking them to cell-killing agents. In other words, ADCs are antibodies attached to chemotherapy. The combination provides greater treatment precision and avoids killing healthy patient cells. It significantly improves the drug's tolerability over traditional chemotherapy, whose less precise nature can kill healthy cells, resulting in severe side effects.

The treatment category has seen a spike in deal making, with ADC-focused M&A and partnership activity worth nearly \$100 billion in 2023.<sup>7</sup> New research presented at ASCO suggested the treatment category's benefit is well worth the hype.

### A Growing Category Where Opportunities Abound

Since the first ADC approval in 2000, the Food and Drug Administration has approved twelve such treatments, including AstraZeneca and Daiichi Sankyo's standout Enhertu.<sup>8</sup> New data presented at ASCO showed Enhertu can be beneficial for breast cancer patients with "ultra-low" expression of **HER-2**, a commonly mutated gene that accelerates cancer growth.

The treatment, originally approved in 2019, cut the risk of disease progression or death by 37% versus a physician's choice of chemotherapy.<sup>9</sup> The data suggest Enhertu should be used prior to chemotherapy in a common type of advanced breast cancer. Enhertu's increasing success drove sales to \$3 billion in 2023, and ongoing efforts to broaden its market are anticipated to boost sales to \$15 billion by 2030.<sup>10</sup>

AbbVie, for its part, has been a smaller player in the oncology space, though its presentations at ASCO showed a clear intent to play a larger role in the growing oncology treatment market. The firm presented phase 2 clinical data for its investigational lung cancer ADC, where nearly 29% of patients saw tumor shrinkage.<sup>11</sup> For context, a common chemotherapy used for lung cancer historically results in tumor shrinkage in about 15-20% of patients with a higher side effect profile.<sup>12</sup> AbbVie recently acquired ADC pioneer ImmunoGen for \$10 billion, suggesting a high level of conviction in the technology's ability to improve patient outcomes and drive growth.<sup>13</sup>

ADCs are expected to achieve 2030 sales of \$46 billion, up from \$10 billion in 2023.<sup>14</sup>

## The AI Craze in Healthcare Shows No Signs of Stopping

The AI theme has continued to pervade nearly every healthcare **industry event**, and this year's ASCO meeting was no exception. As the boundaries between technology and healthcare continue to blur, **AI has emerged as a tool to predict treatment responses and identify patients who could benefit from medications.**

At this year's ASCO, we saw a wide variety of AI-focused presentations. Among them, Montefiore Einstein Comprehensive Cancer Center presented findings from its conversational AI platform, created to reach out to patients that no-showed or canceled colonoscopy screening appointments. Colonoscopies are a key tool for detecting colon cancer, yet more than a third of U.S. adults are overdue for colorectal screenings even as incidence rates for colon cancer rise.<sup>15</sup> The AI platform helped double the colonoscopy completion rate among flagged patients, offering an aid to medical centers looking to boost cancer screening rates.<sup>16</sup>

A small AI imaging firm, Qure.ai, presented new protocols for leveraging AI in the analysis of medical imaging to detect lung cancer. Lung cancer is the leading cause of cancer deaths globally, with around 75% of patients being diagnosed only after the disease has metastasized.<sup>17,18</sup> Qure.ai's services help identify early signs of lung cancer like small pulmonary nodules during general healthcare imaging procedures, helping identify cancer patients before the cancer spreads. Early detection of cancer boosts survival rates by over 90% if treatment starts at stage 1.<sup>19</sup>

There were also a host of presentations on the use of AI to facilitate clinical trials. Privately held ConcertAI announced it is partnering with NVIDIA to develop new clinical simulations for clinical trials to recruit patients and analyze findings. Cancer drug clinical trials typically take 30-40% longer to complete compared to trials for other types of drugs, and the industry is leveraging AI to accelerate the drug development process.<sup>20</sup> AstraZeneca recently announced it is utilizing AI capabilities to identify biological targets that have a higher likelihood of success. This process slashes the time it takes to identify and validate targets, "from three months to three days."<sup>21</sup>



## Conclusion: The Blurring of Technology and Healthcare Could be Good News For Patients and Investors

We left the ASCO Annual Meeting excited about the potential of the revolutionary treatments that were on display. As populations age, cancer treatments are likely to become more common, and improved treatments like CAR-T and ADCs could drive better patient outcomes with fewer side effects. By leveraging advances in genomics and artificial intelligence, we see numerous potential growth drivers for companies in the healthcare space.

### Footnotes

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2. Bristol Myers Squibb. (2024, January 10). Blood Cancer Fact Sheet.
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