# Targeted drug doubles progression free survival in Hodgkin lymphoma

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A phase 3 trial of brentuximab vedotin (BV), the first new drug for Hodgkin lymphoma in over 30 years, shows that adults with hard-to-treat Hodgkin lymphoma given BV immediately after stem cell transplant survived without the disease progressing for twice as long as those given placebo (43 months vs 24 months).

The findings, published in *The Lancet*, are potentially practice changing for this young cancer population who have exhausted other treatment options and for whom prognosis is poor.

"No medication available today has had such dramatic results in patients with hard-to-treat Hodgkin lymphoma", says lead author Craig Moskowitz, a Professor of Medicine at Memorial Sloan Kettering Cancer Center, New York, USA.

Hodgkin lymphoma is the most common blood cancer in young adults aged between 15 and 35 years. Most patients are cured with chemotherapy or radiotherapy. However, for patients who relapse, or do not respond to initial therapy, the treatment of choice is usually a combination of high-dose chemotherapy and autologous stem cell transplant (ASCT)—a procedure that uses healthy stem cells from the patient to replace those lost to disease or chemotherapy. While about 50% of patients who undergo this procedure are cured, for the other half treatment is palliative.

BV is an antibody attached to a powerful chemotherapy drug that seeks

out cancer cells by targeting the CD30 protein on Hodgkin lymphoma cells. BV sticks to the CD30 protein and delivers chemotherapy directly into the cancer cell to kill it. Recently, BV has been approved for relapsed or refractory Hodgkin lymphoma in 50 countries.

In the AETHERA phase 3 trial, Moskowitz and colleagues aimed to establish whether early treatment with BV after ASCT could prevent disease progression. They randomly assigned 329 patients with Hodgkin lymphoma aged 18 or older who were at high risk of relapse or progression after ASCT to 16 cycles of BV infusions once every 3 weeks or placebo.

At 2 years follow up, the cancer had not progressed at all in 65% of BV patients compared with 45% in the placebo group. "Nearly all of these patients who are progression free at 2 years are likely to be cured since relapse 2 years after a transplant is unlikely", explains Dr Moskowitz.

BV was generally well tolerated. The most common side effects were peripheral neuropathy (numbness or pain in the extremities due to nerve damage; 67% BV vs 13% placebo) and neutropenia (low white blood count; 35% vs 12%).

According to Dr Moskowitz, "The bottom line is that BV is a very effective drug in poor risk Hodgkin lymphoma and it spares patients from the harmful effects of further traditional chemotherapy by breaking down inside the cell resulting in less toxicity."

Writing in a linked Comment, Professor Andreas Engert from the University Hospital of Cologne in Germany discusses how best to define which patients are at high risk of relapse and should be treated with BV. He writes, "AETHERA is a positive study establishing a promising new treatment approach for patients with Hodgkin's lymphoma at high risk for relapse. However, with a progression-free survival of about 50% at

24 months in the placebo group, whether this patient population is indeed high risk could be debated...An international consortium is currently reassessing the effect of risk factors in patients with relapsed Hodgkin's lymphoma to define a high-risk patient population in need of consolidation treatment. We look forward to a better definition of patients with relapsed Hodgkin's lymphoma who should receive consolidation treatment with brentuximab vedotin.

**More information:** *The Lancet*, www.thelancet.com/journals/lan … (15)60165-9/abstract

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