Roche's trastuzumab emtansine (T-DM1) significantly extended survival in people with aggressive form of breast cancer

Roche (SIX: RO, ROG; OTCQX: RHHBY) today announced updated survival results from the Phase III EMILIA study, which showed that people with previously treated HER2-positive metastatic breast cancer (mBC) survived significantly longer (overall survival, a co-primary endpoint) when treated with trastuzumab emtansine (T-DM1) compared to those who received the combination of lapatinib and Xeloda® (capecitabine).

Results showed the risk of death was reduced by 32 percent for people who received trastuzumab emtansine compared to those who received lapatinib plus Xeloda (HR=0.68; P=0.0006). People in the study treated with trastuzumab emtansine survived a median of 5.8 months longer than those who received lapatinib and Xeloda (median overall survival: 30.9 months vs. 25.1 months). No new safety signals were observed and adverse events (AEs) were consistent with those seen in previous studies, with fewer people who received trastuzumab emtansine experiencing Grade 3 or higher (severe) (AEs) than those who received lapatinib plus Xeloda (40.8 percent vs. 57.0 percent).1

"We are extremely pleased that the new data from the EMILIA study showed people receiving trastuzumab emtansine survived longer than those who received the standard of care," said Hal Barron, M.D., Chief Medical Officer and Head, Global Product Development. "We are continuing to work with regulatory authorities to bring this innovative medicine, which significantly improved both progression-free survival and overall survival, to people with HER2-positive metastatic breast cancer as soon as possible."

These updated survival results from the EMILIA study will be presented at the ESMO 2012 Congress (European Society for Medical Oncology) (Abstract # LBA12, Monday, October 1, 2012, 14.10 CEST) by Dr. Sunil Verma, Sunnybrook Regional Cancer Center, University of Toronto, Canada. Data from the EMILIA study has also been published today in the online edition of the New England Journal of Medicine.2
Genentech, a member of the Roche Group, has submitted a Biologics License Application (BLA) for trastuzumab emtansine to the U.S. Food and Drug Administration (FDA) for use in people with HER2-positive, unresectable locally advanced or metastatic breast cancer. Roche has submitted a Marketing Authorisation Application to the European Medicines Agency (EMA) for the same indication.

Based on these updated overall survival results, people in the lapatinib and Xeloda arm of EMILIA are being offered the option to receive trastuzumab emtansine.

**About the EMILIA study**

EMILIA (TDM4370g/BO21977) is an international, Phase III, randomised, open-label study comparing trastuzumab emtansine alone to lapatinib in combination with Xeloda in 991 people with HER2-positive locally advanced or metastatic breast cancer who had previously been treated with Herceptin and a taxane chemotherapy.

The study has met both co-primary efficacy endpoints of progression free survival (PFS, as assessed by an independent review committee) and overall survival. PFS and safety results from the EMILIA study were previously reported at the 48th Annual Meeting of the American Society of Clinical Oncology (ASCO) in June 2012 and include:

- A significant improvement in the time people receiving trastuzumab emtansine (n=495) lived without their disease getting worse (PFS) compared to those who received lapatinib plus Xeloda (n=496), as assessed by independent review (HR=0.65, 35 percent reduction in risk of disease worsening or death, p<0.0001; median PFS 9.6 months vs. 6.4 months).\(^1\)

- People who received trastuzumab emtansine had a longer time before their cancer symptoms worsened (time to symptom progression; a secondary endpoint and patient-reported measure of quality of life), compared with those who received lapatinib plus Xeloda (7.1 months versus 4.6 months; p<0.0001).\(^1\)

- Fewer people who received trastuzumab emtansine experienced Grade 3 or higher AEs than those who received lapatinib plus Xeloda (40.8 percent vs. 57.0 percent). For people receiving trastuzumab emtansine, compared to those receiving lapatinib plus Xeloda, the most common (occurring in more than 2 percent of participants) Grade 3 or higher AEs were low platelet count (12.9 percent vs. 0.2 percent), increased levels of enzymes released by the liver and other organs (aspartate aminotransferase: 4.3 percent vs. 0.8 percent; alanine aminotransferase: 2.9 percent vs. 1.4 percent; in most people, these levels had generally returned to normal by the time of the next dose of trastuzumab emtansine) and anaemia (2.7 percent vs. 1.6 percent).\(^1\)
About trastuzumab emtansine

Trastuzumab emtansine is an antibody-drug conjugate (ADC) being studied in HER2-positive cancers. It is comprised of the antibody trastuzumab and the chemotherapy DM1 attached together using a stable linker. Trastuzumab emtansine is designed to target and inhibit HER2 signalling and deliver the chemotherapy DM1 directly inside HER2-positive cancer cells. Trastuzumab emtansine binds to the HER2-positive cancer cells, and is thought to block out-of-control signals that make the cancer grow while also calling on the body’s immune system to attack the cancer cells. Once trastuzumab emtansine is taken up by those cancer cells, it is designed to destroy them by releasing the DM1.

Genentech licenses technology for trastuzumab emtansine under an agreement with ImmunoGen, Inc.

Building on the results of trastuzumab emtansine studies to date, there are approximately 25 ADCs in Roche’s pipeline.

About breast cancer

Breast cancer is the most common cancer among women worldwide. Each year about 1.4 million new cases of breast cancer are diagnosed worldwide, and over 450,000 women will die of the disease annually. In HER2-positive breast cancer, increased quantities of the human epidermal growth factor receptor 2 (HER2) are present on the surface of the tumour cells. This is known as “HER2 positivity” and affects approximately 15-20 percent of women with breast cancer. HER2-positive cancer is a particularly aggressive form of breast cancer.

About Roche

Headquartered in Basel, Switzerland, Roche is a leader in research-focused healthcare with combined strengths in pharmaceuticals and diagnostics. Roche is the world’s largest biotech company with truly differentiated medicines in oncology, virology, inflammation, metabolism and CNS. Roche is also the world leader in in-vitro diagnostics, tissue-based cancer diagnostics and a pioneer in diabetes management. Roche’s personalized healthcare strategy aims at providing medicines and diagnostic tools that enable tangible improvements in the health, quality of life and survival of patients. In 2011, Roche had over 80,000 employees worldwide and invested over 8 billion Swiss francs in R&D. The Group posted sales of 42.5 billion Swiss francs. Genentech, United States, is a wholly owned member of the Roche Group. Roche has a majority stake in Chugai Pharmaceutical, Japan. For more information: www.roche.com.
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**Additional information**

Roche in Oncology: [www.roche.com/de/media/media_backgrounder/media_oncology.htm](http://www.roche.com/de/media/media_backgrounder/media_oncology.htm)

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**References**

1. Verma, S et al. Results from EMILIA, a Phase 3 study of trastuzumab emtansine (T-DM1) vs. capecitabine and lapatinib in HER2-positive locally advanced or metastatic breast cancer (MBC). Abstract #LBA12 ESMO 2012 Congress (European Society for Medical Oncology).
3. Welslau, M et al. Patient-reported outcomes (PROs) from EMILIA, a Phase 3 study of trastuzumab emtansine (T-DM1) vs. capecitabine and lapatinib (XL) in HER2-positive locally advanced or mBC. Abstract # 329P. ESMO 2012 Congress (European Society for Medical Oncology).