Tarceva® in non small cell lung cancer
Summary of key clinical studies

Background

Lung cancer is the leading cause of cancer death globally. Each year 1.18 million people die as a result of the disease,[1] equating to more than 3,000 deaths worldwide every day.[2] Non small cell lung cancer (NSCLC) is the most common form of the disease, accounting for approximately 85% of all cases.[3] The average 5 year survival rate of stage IV (advanced) NSCLC is 7.5%.[4] Some NSCLC tumours possess activating mutations in the epidermal growth factor receptor (EGFR) gene, changing the structure of the EGFR proteins that they code for such that they have increased activity. NSCLC with EGFR activating mutations is considered to be a genetically distinct form of lung cancer.[5]

Roche has an extensive research and clinical trial programme to improve treatment options in various lines of therapy for patients with lung cancer, specifically focusing on NSCLC. Current international clinical trials are exploring the benefits of Tarceva (erlotinib) in the first-line treatment of patients with NSCLC with EGFR activating mutations. Studies have shown that the presence of EGFR activating mutations appears to correlate with responsiveness to treatment with EGFR tyrosine kinase inhibitors (TKIs), and it is becoming apparent that patients with NSCLC with EGFR activating mutations may gain particular benefit from treatment with Tarceva. A label extension is currently under review in Europe for use of Tarceva as a first-line monotherapy treatment for people with this distinct form of lung cancer.

Regardless of mutation status Tarceva is approved in the EU as monotherapy for maintenance treatment in patients with locally advanced or metastatic NSCLC with stable disease after platinum-based initial chemotherapy and in the US for patients with locally advanced or metastatic NSCLC whose disease has not progressed after standard platinum-based first-line chemotherapy. Tarceva is also an established treatment in Europe and the US for patients with advanced forms of NSCLC after failure of at least one prior chemotherapy regimen ('second-line' treatment).

Below is a summary of the key trials investigating Tarceva.

Tarceva as first-line therapy for people with advanced NSCLC with EGFR activating mutations

OPTIMAL

OPTIMAL is a prospective phase III study evaluating first-line treatment with Tarceva versus chemotherapy in NSCLC Asian patients with EGFR activating mutations. The primary endpoint of the study is progression free survival. Secondary endpoints include overall response rate; overall survival; quality of life and safety. First data from the study will be presented at the 35th Congress of the European Society for Medical Oncology in 2010.

EURTAC

This prospective, randomised, controlled phase III study is evaluating the use of Tarceva as first-line therapy versus chemotherapy in Caucasian patients with NSCLC with EGFR activating mutations. Progression free survival is the primary endpoint and overall survival is the secondary endpoint of this study. Data are expected in 2011.

CALGB 30406

This randomised, prospective phase II trial designed to evaluate Tarceva alone or in combination with chemotherapy (carboplatin and paclitaxel) showed that Tarceva delivered survival benefits in patients with advanced lung adenocarcinoma (the most common form of NSCLC) with EGFR activating mutations. The results showed that Tarceva plus chemotherapy resulted in median overall survival of 39 months and Tarceva alone gave a median survival of 31.3 months.[6]

Tarceva as maintenance treatment for people with advanced NSCLC

SATURN

The SATURN study showed that maintenance therapy with Tarceva significantly prolongs progression free survival (PFS) and overall survival (OS).[7]

The study included more than 880 patients with advanced NSCLC who had received initial treatment with standard platinum based chemotherapy.[8]

Patients with stable disease (disease that remains largely unchanged after initial chemotherapy) showed a pronounced PFS and OS benefit when Tarceva maintenance therapy was given, with a 47% improvement in PFS and a 39% improvement in OS.[9] The OS benefit was seen in a broad range of patients regardless of tumour histology and irrespective of EGFR mutation status. This trial formed the basis of the EU and US approvals for Tarceva as a maintenance therapy.

ATLAS

The ATLAS study, which included more than 1,000 patients, showed that combined maintenance treatment with Avastin and Tarceva following treatment with Avastin in combination with platinum-based chemotherapy can extend the time that patients live without their disease progressing (progression-free survival, or PFS). Patients who received the combined maintenance therapy with Avastin and Tarceva had a 39% improvement in PFS compared to those who received maintenance therapy with Avastin alone.[10]

Tarceva as second-line therapy for people with advanced NSCLC

BR.21

The BR.21 study showed that Tarceva significantly extended the time people lived with incurable stage IIIB/IV NSCLC from 4.7 to 6.7 months.

The study included approximately 700 patients receiving Tarceva monotherapy or placebo, all of whom had failed at least one prior chemotherapy regimen.

The findings showed that 31% of patients in the Tarceva group were alive at one year, compared to 22% in the placebo group.[11]

TRUST

TRUST is the largest real-world study to date of patients with advanced NSCLC, including over 6,000 patients. TRUST confirmed the favourable survival and safety profile of Tarceva across a broad range of patient subgroups.[12]

FAST ACT

The multicenter, randomised phase II **F**irst-Line **A**sian **S**equential **T**arceva **a**nd **C**hemotherapy **T**rial (FAST ACT) found that sequential administration of Tarceva and gemcitabine/platinum chemotherapy led to a significant improvement in progression free survival in patients with advanced NSCLC irrespective of tumour type or mutation status, compared with patients who received sequential treatment with placebo and chemotherapy.[13]

References

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