



Therapeutic Class ReviewSM

erlotinib (TarcevaTM)

July 2005

New Product for Review:

erlotinib (TarcevaTM) - Genentech

Dossier Provided by Manufacturer: Yes

Available Therapeutic Alternatives*:

Preferred/Formulary	Non-Preferred/Non-Formulary
	gefitinib (Iressa [®]) [AstraZeneca Pharmaceuticals LP]

*First-line therapy includes a platinum-based regimen – these therapies are covered under the Medical Benefit

*Second-line therapies include: IV docetaxel (Taxotere[®]) and pemetrexed (Alimta[®]) – these therapies are covered under the Medical Benefit

Executive Summary:

- Platinum-based chemotherapy combinations have demonstrated the best overall survival rates (ranging from 8 to 14 months) among the agents currently used to treat advanced NSCLC and are considered first-line treatment options.
- Erlotinib (Tarceva) demonstrated a statistically significant survival benefit over placebo (6.7 versus 4.7 months) when it was administered to patients who experienced disease progression during or after first-line therapy for NSCLC.
- There was no additional clinical benefit seen when erlotinib (Tarceva) was added to cisplatin-based combination regimens in the first-line treatment of advanced NSCLC.
- Erlotinib (Tarceva) is approved as a 2nd- or 3rd-line agent for the treatment of advanced NSCLC.
- There is no evidence that demonstrates either inferior or superior efficacy of Tarceva over other second-line therapies for NSCLC.
- Gefitinib (Iressa), an antitumor drug for treatment of NSCLC with properties similar to those of erlotinib (Tarceva), has not demonstrated any survival benefit in clinical trials.
- The most prevalent adverse effects observed in patients taking erlotinib (Tarceva) were rash and diarrhea.

Conclusion

Erlotinib (Tarceva) is preferred/formulary because it is an option for patients with NSCLC after first-line treatment has failed, and may prolong survival.

Products

Drug Product	Date of FDA Approval	FDA Approved Indication	Dose/Route	AWP Cost*	Potential Off-Label Uses
erlotinib (Tarceva™) ^{1,3}	11/2004	Treatment of locally advanced or metastatic non-small cell lung cancer after failure of at least one prior chemotherapy regimen.	150 mg orally once daily	\$2532.50	colon cancer, cancer of the head and neck, breast cancer, ovarian carcinoma, pancreatic carcinoma, renal-cell carcinoma
gefitinib (Iressa®) ^{2,3} Note: Iressa will only be available through the <i>Iressa Access Program</i> after September 15, 2005.	5/2003	Monotherapy for the continued treatment of patients with locally advanced or metastatic non-small cell lung cancer after failure of both platinum-based and docetaxel chemotherapies who are benefiting or have benefited from Iressa.	250 mg orally once daily	\$2127.35	mesothelioma, other solid tumors known to express epidermal growth factor receptor (EGFR)

*AWP (average wholesale price) based on First Data Bank as of March 2005 for 1 month (30 days) of therapy.

References

1. Tarceva™ (erlotinib) Product Information. South San Francisco, CA: Genentech, 2004.
2. Iressa® (gefitinib) Product Information. Wilmington, DE: AstraZeneca Pharmaceuticals L.P., 2004.
3. Thomson Micromedex © 1974-2005. Micromedex Healthcare Series, Vol 120.
4. Center for Drug Evaluation and Research. Approval package for application number NDA 21-743; Medical Review. Available at: http://www.fda.gov/cder/foi/nda/2004/21-743_Tarceva_medr.PDF. Accessed April 6, 2005.
5. Product Dossier: Tarceva™ (erlotinib HCl). Genentech, Inc; South San Francisco, CA. Data reviewed 4/07/2005.
6. NCCN® Clinical Practice Guidelines in Oncology, Non-small cell lung cancer v.2.2005. National Comprehensive Cancer Network 2005. Available at: http://www.nccn.org/professionals/physician_gls/PDF/nscl.pdf. Accessed on 4/14/2005.
7. Herbst RS, Prager D, Hermann R, et al. TRIBUTE-A Phase III trial of erlotinib HCl (OSI-774) combined with carboplatin and paclitaxel (CP) chemotherapy in advanced non-small cell lung cancer (NSCLC). Proc Am Soc Clin Oncol 2004;23:ASCO Abstract #7011.
8. Gatzemeier U, Pluzanska A, Szczesna A, et al. Results of a Phase III trial of erlotinib (OSI-774) combined with cisplatin and gemcitabine (GC) chemotherapy in advanced non-small cell lung cancer (NSCLC). Proc Am Soc Clin Oncol 2004;23:ASCO Abstract #7010.
9. Pao W, Miller VA, Politi KA, et al. Acquired resistance of lung adenocarcinomas to gefitinib or erlotinib is associated with a second mutation in the EGFR kinase domain. PloS Medicine 2005;2(3):1-11. Available at: www.plosmedicine.org.
10. Taxotere® (docetaxel) Product Information. Bridgewater, NJ: Aventis Pharmaceuticals Inc, 2004.
11. Alimta® (pemetrexed) Product Information. Indianapolis, IN: Eli Lilly and Company, 2004.
12. Johnson BE, Lucca J, Rabin MS, et al. Preliminary results from a Phase II study of the epidermal growth factor receptor tyrosine kinase inhibitor erlotinib in patients > 70 years of age with previously untreated advanced non-small cell lung carcinoma. Proc Am Soc Clin Oncol 2004;23:ASCO Abstract #7080.
13. Perez-Soler R, Chachoua A, Hammond LA, et al. Determinants of tumor response and survival with erlotinib in patients with non-small cell lung cancer. J Clin Oncol 2004;22:3238-47.
14. Eastern Cooperative Oncology Group (ECOG) [homepage on the internet]; 1 screen. Available at: http://www.ecog.org/general/perf_stat.html. Accessed on 4/18/05.