

EGFR Fact Sheet

If a biomarker test shows you have EGFR positive (EGFR+) nonsmall cell lung cancer (NSCLC), what does that mean? This fact sheet explains the diagnosis and how it might affect your treatment.



WHAT IS EGFR?

EGFR, which stands for **epidermal growth factor receptor**, is both a gene and a protein involved in cell growth. If there is a mutation in the EGRF gene, it can cause out-of-control cell growth and lead to cancer. Though the cause of an EGFR mutation is not yet known, we do know that blocking the EGFR protein in NSCLC tumors can slow cancer growth. Within the category of EGFR+ cancers are the extensive phenotypic variations, exon 19, 20 and 21, which may impact your choice of treatments.



WHO HAS EGFR+ LUNG CANCER?

This mutation, generally found in patients with NSCLC adenocarcinoma, occurs in about 15% of patients overall and up to 50 percent of Asian patients, most often in women, nonsmokers and light smokers.



HOW DO DOCTORS TREAT EGFR+ LUNG CANCERS?

When you test positive for the EGFR biomarker, you may benefit from a targeted therapy called a tyrosine kinase inhibitor. These drugs are specifically formulated to block EGFR and prevent cancer from growing and spreading, while having far fewer side effects than chemotherapy.

The following drugs have been approved by the U.S. Food and Drug Administration to treat advanced EGFR-positive NSCLC. Most are in pill form and taken once a day, but two are administered intravenously. **Rybrevant** is given

every two to four weeks and **Portrazza**, used to treat advanced squamous cell lung cancer, is administered with chemotherapy. Other drugs may be available in clinical trials. If the drug you're taking isn't working, ask your doctor if you can try another. This is a list of all targeted drugs approved for EGFR+ NSCLC.

- Afatinib (Gilotrif)
- Amivantamab (Rybrevant), *approved only for EGFR+ exon 20*
- Dacomitinib (Vizimpro)
- Erlotinib (Tarceva)
- Gefitinib (Iressa)
- Mobocertinib (Exkivity), *approved only for EGFR+ exon 20*
- Necitumumab (Portrazza), *approved only for squamous cell EGFR+ NSCLC*
- Osimertinib (Tagrisso)

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Common side effects of these drugs include:

- Diarrhea
- Fatigue
- Loss of appetite
- Mouth sores
- Nail infection
- Skin changes (acne-like rash, dry skin, itchiness)
- Swelling

In rare cases, these drugs may cause problems in the heart, lungs, liver or eyes.

Other drugs may be available in clinical trials, including:

- Amivantamab (Rybrevant) - *for EGFR+ exon 19 and 21*
- Necitumumab (Portrazza) - *for non-squamous cell EGFR+ NSCLC*

Common side effects of both drugs include:

- Breathing problems (Rybrevant only)
- Diarrhea
- Fatigue
- Infusion reactions (Rybrevant only)
- Loss of appetite
- Mouth sores
- Nail infection
- Nausea and vomiting
- Skin changes (acne-like rash, dry skin, itchiness)
- Swelling

In rare cases, these drugs may cause heart, lung, liver or eye problems.



Last Reviewed 6.2.22