

FDA Clears First-Line Lung Cancer Drug

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Why in News?

Recently, the U.S. Food and Drug Administration (FDA) approved zongertinib (Hernexeos) of Boehringer Ingelheim as a first-line treatment for a rare form of lung cancer.

Zongertinib

- The drug Zongertinib is marketed as Hernexeos.
- **Type** - The drug is a **Tyrosine kinase inhibitor (TKI)**.

Tyrosine kinase is a protein in the body that helps control how cells grow and function by sending signals inside the cell.

- Tyrosine kinase inhibitors (TKIs) are a kind of targeted therapy.
- They work by blocking tyrosine kinase enzymes, stopping cancer cells from growing and dividing.
- **Target** - For adults with **advanced non-squamous non-small cell lung cancer (NSCLC)** having HER2 (ERBB2) tyrosine kinase domain mutations.
- **Approval Status** - Earlier approved for the patient whose cancer progressed despite prior treatment.
- Now approved as first-line treatment for previously untreated patients.
- **Clinical result** - Around **76% of untreated patients showed substantial tumour reduction**, compared to current standard of care which achieved 30-45%.
- **Benefits** - It may be easier to take, have fewer side effects, and work better than current treatments.

Non-Small Cell Lung Cancer (NSCLC)

- **Disease** - Most common form of lung cancer, typically growing and **spreading more slowly than small cell lung cancer**.

- **Type - Adenocarcinoma** - Most common type that usually starts in mucus-producing gland cells, often in the outer parts of the lung.
- **Squamous cell carcinoma** - Starts in the central airways within the flat cells lining the airways.
- **Large cell carcinoma** - A less common, fast-growing type that can appear anywhere.
- **Symptoms** - Persistent cough, coughing up blood, chest pain, breathlessness, hoarseness, weight loss, and sometimes bone pain or neurological problems in advanced stages.
- **Cause** - Mainly due to tobacco smoking.
- Also linked exposure to asbestos, radon, arsenic, chromium, nickel, ionising radiation, and air pollution.
- Higher risk in pulmonary fibrosis and HIV patients.
- **Stages** - In early stages (I-III), the cancer is mainly limited to the lung or nearby areas and may still be cured with treatment.
- In Stage IV, the cancer has spread to distant organs like the brain, bones, or liver, making it harder to cure.
- **Treatment** -
 - Surgery for the removal of the tumour
 - Chemotherapy with anti-cancer drugs
 - Radiation therapy involves high-energy rays to kill cancer cells.
 - Targeted therapy with drugs acting on specific gene mutations
 - Immunotherapy (boosts the body's immune system to fight cancer), and combination therapy, depending on stage and patient condition.

References

1. [TH | FDA Clears First-Line Lung Cancer Drug](#)
2. [FDA | Zongertinib](#)
3. [NCBI | Non-Small Cell Lung Cancer Treatment](#)