



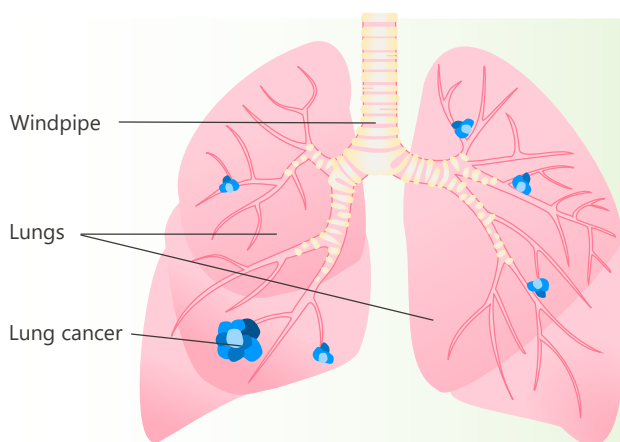
TREATMENTS FOR EGFR MUTATION-POSITIVE ADVANCED NON-SMALL-CELL LUNG CANCER



Around **1,600 people** are diagnosed with lung cancer **every year**, making it one of the **most common** cancers in Singapore. It is also one of the **leading causes** of cancer-related **deaths** locally.¹

Two in three patients¹ have cancer that has spread outside the lungs to other parts of the body, which is known as **advanced lung cancer**.

There are different types of lung cancer depending on which cells are affected. Non-small-cell lung cancer or **NSCLC** is the most common type.



Doctors may send samples of the cancer for **testing** to determine which treatment will work best.

Some patients with NSCLC have an abnormality (**mutation**) in the Epidermal Growth Factor Receptor (**EGFR**) gene which helps the cancer grow. This is called **EGFR mutation-positive** NSCLC.

How is NSCLC **treated**?

Advanced NSCLC options include:

Chemotherapy






Radiotherapy

Targeted therapy

Immunotherapy +/- chemotherapy

Targeted therapy are medicines that are **effective** against cancers with **specific** genetic mutations.

There are **5** targeted therapies approved for patients who have **advanced** NSCLC with an EGFR mutation. These drugs are known as EGFR tyrosine kinase inhibitors (**EGFR-TKIs**).

-  Afatinib
-  Dacomitinib
-  Erlotinib
-  Gefitinib
-  Osimertinib

Legend:  Tablets

Published studies show that all 5 EGFR-TKIs are **effective** treatments for EGFR mutation-positive NSCLC. They have **different** side effects from each other.

- ▶ For patients with **newly diagnosed NSCLC**, **afatinib**, **dacomitinib** and **osimertinib** are likely to be **more effective** than erlotinib and gefitinib in **extending** the length of time they can live without their cancer getting worse.
- ▶ While on treatment, about half of patients develop **another mutation** (T790M) in the EGFR gene which causes some EGFR-TKIs to **stop working** (resistance). If this happens, **osimertinib** can be used if the patient has not had it before.



ACE reviewed all of the clinical evidence for each EGFR-TKI and negotiated prices with the manufacturers.^{2,3}

Value for money (cost-effectiveness) of most EGFR-TKIs was **improved** when the manufacturers **reduced** the drug prices.

For **eligible** patients who need osimertinib, the manufacturer will provide some **free tablets** to help reduce their treatment costs.



Cash or MediSave* needed **every month** after subsidy* and MediShield Life for a **middle-income patient** receiving **outpatient** treatment at **public hospitals**:

After funding enhancements in September 2022[#]

For patients with newly diagnosed NSCLC

Generic erlotinib (Inerlotinib)	Less than \$50	Subsidised ✓ MediShield Life: \$200 ✓
Generic gefitinib (Ingefinitinib)	Less than \$50	Subsidised ✓ MediShield Life: \$200 ✓
Dacomitinib	\$50 to \$100	Subsidised ✓ MediShield Life: \$600 ✓
Afatinib	\$100 to \$200	Subsidised ✓ MediShield Life: \$600 ✓
Osimertinib	\$900 to \$1,000	Subsidised ✗ MediShield Life: \$2400 ✓

For patients whose cancer is resistant to previous therapy due to the T790M mutation

Osimertinib	\$100 to \$200	Subsidised ✓ MediShield Life: \$2400 ✓
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Afatinib, dacomitinib, erlotinib and gefitinib (for patients with newly diagnosed disease), and **osimertinib** (for patients whose cancer is resistant to previous therapy due to the T790M mutation) were **recommended** for government funding.



Funding enhancements will be in place by September 2022. Talk to your **doctor** to discuss which treatment is suitable for you. You can also speak to a **medical social worker** if you need further financial assistance.

* MediSave withdrawal is capped at \$600 per month for these treatments. For Singaporeans who are eligible for subsidy, treatment costs will be subsidised by 40% to 75%.

[#] Calculations for funding enhancements include new subsidies and changes to MediSave and MediShield Life. Expenses have been calculated using prices proposed by the manufacturers including patient assistance programmes. Expenses will differ according to the amount of medicine that each patient needs and does not include other costs for doctor consultations, medical tests etc.

- Sources:
1. Health Promotion Board National Registry of Diseases Office. Singapore Cancer Registry Annual Report 2019. 28 Jan 2022.
 2. ACE Technology Guidance, dacomitinib for treating EGFR mutation-positive non-small-cell lung cancer. 17 Aug 2021.
 3. ACE Technology Guidance, osimertinib for treating EGFR mutation-positive non-small-cell lung cancer. 12 Jul 2022.
 4. Ministry of Health, Singapore. Cancer Drug List. <https://go.gov.sg/moh-cancer-drug-list>



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