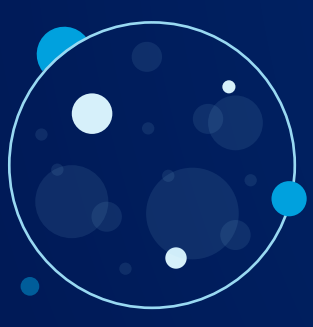
EXPAND YOUR NSCLC KNOWLEDGE: THE HARSH REALITIES OF EGFR EXON 20 INSERTIONS (EX20INS)

Janssen Oncology
PHARMACEUTICAL COMPANIES OF Johnson&Johnson

Spot the difference: understand how EGFR exon 20 insertions pose a particularly harsh reality in NSCLC, compared to more common EGFR mutations



You may already be familiar with several common non-small cell lung cancer (NSCLC) mutations that occur in the epidermal growth factor receptor (EGFR). Many of these confer sensitivity to currently approved EGFR-tyrosine kinase inhibitors (TKIs).[1]

But, what do you know about the group of mutations called EGFR exon 20 insertions (ex20ins)?

EGFR exon 20 insertions: a group of mutations which have similar clinical characteristics to EGFR-TKI-sensitising mutations, but are associated with poorer outcomes[2–5]

Like other EGFR mutations, EGFR ex20ins tend to affect:[2,3]

Women | Non-smokers | Those of Asian ethnicity | Tumours with adenocarcinoma histology

EGFR ex20ins cause structural changes in the EGFR receptor that generally prevent effective interactions with currently approved EGFR-TKIs, so these therapies have limited efficacy in patients with these mutations.[1,2] This means that each year, **~60,000 people across the world could be robbed of the things most precious to them...** [1,2,6–12]

ROBBED OF TIME

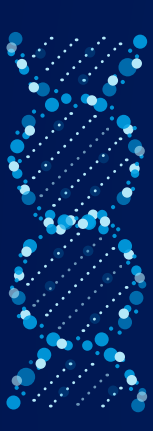
Patients with EGFR ex20ins+ NSCLC have a particularly poor prognosis.[4] They may only have between **4–17 months to live*** - less than half the time compared to those living with more common EGFR-TKI-sensitive mutations (32–39 months).** [4,5] What's more, the precious time left is often tainted by the negative **psychological and emotional burden** of the disease, and patients are often left worrying about treatment, the future or finances.† [13]

ROBBED OF HOPE

A diverse array of EGFR ex20ins mutations have been identified,[14] most of which confer **primary intrinsic resistance to currently-approved EGFR-TKI therapies**, by altering the shape of the EGFR-TKI binding pocket.[1,2] This diminishes the options available to you to take action against your patient's cancer – options which are effective in so many other EGFR+ NSCLC tumours.[1] This only makes an ex20ins diagnosis more difficult to accept, both for you and your patient.[4,11,15]

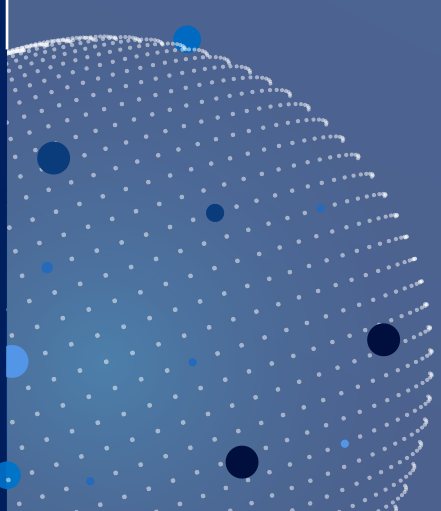
ROBBED OF LIFE

Due to the lack of more effective, targeted options, patients with an EGFR ex20ins+ NSCLC diagnosis are **most commonly prescribed chemotherapies** as a first-line therapy, which are non-selective, with higher toxicity than currently approved targeted EGFR-TKI therapies.[4,16–18]



The current testing landscape may underestimate the number of EGFR ex20ins patients

The current testing landscape may underestimate the number of patients who have EGFR ex20ins, meaning some **patients are left undetected**.[3,19]
However, it is now recognised that emerging techniques such as **next generation sequencing (NGS)** may enable the detection of ex20ins, and these technologies are being rapidly adopted to screen adenocarcinomas for oncogenic targets.[20]



EGFR ex20ins mutations are difficult to spot. However, the continued uptake of comprehensive detection methods, such as NGS panel testing, may enable the accurate identification of ex20ins, so that no patient is left undetected.[3,19,20]

It's time to join the call for better outcomes in EGFR exon 20 insertion-positive NSCLC, compared to those achieved currently.[4,11,12] **Without this, ~60,000 people around the world each year will continue to be robbed of precious time, hope and life.**[1,2,4,6–12]

*Median overall survival. Data from an analysis of 199 real-world, treatment-naïve and relapsed/refractory EGFR exon 20 insertion-positive patients who received either chemotherapy or an EGFR-TKI.[4]

**Median overall survival of 32–39 months has been reported with EGFR-TKI therapy (osimertinib, gefitinib or erlotinib) among patients with EGFR-TKI-sensitive mutations (L858R or exon 19 deletions).[5]

†Data from qualitative interviews conducted with EGFR exon 20 mutation-positive NSCLC patients (n=10), 90% of whom had exon 20 insertion mutations. 100% reported the psychological and emotional burden of the disease, and 60% reported worries about treatment, the future or finances.[13]

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