Lung cancer is a global cause of mortality, with adenocarcinoma being the most prevalent subtype of non-small cell lung cancer (NSCLC).

Alectinib and brigatinib are second-generation anaplastic lymphoma receptor tyrosine kinases (ALKs) that are widely used as first-line therapy for treating ALK-positive advanced non-small cell lung cancer (NSCLC).

Given the lack of a head-to-head comparison of these drugs as first-line therapies, this retrospective observational study aimed to compare the real-world efficacy and safety of alectinib and brigatinib.

### Materials and Methods

- Patients who received alectinib or brigatinib as the first-line treatment for ALK-positive advanced NSCLC
- Endpoint: objective response rate (ORR), intracranial ORR, time to next treatment (TTNT), progression-free survival (PFS), overall survival (OS), and safety profiles

### Results

- 176 patients received alectinib and 32 patients received brigatinib
- Median follow-up duration was 16.5 months (95% CI; 14.7-18.3) in the brigatinib group and 27.5 months (95% CI; 24.6-30.4) in the alectinib group.
- ORR was 92.5% with alectinib and 93.8% for brigatinib.
- Intracranial ORR rates were 92.7% (38/41) and 100% (10/10)
- The rate of PFS at 12 months was comparable between the alectinib group and the brigatinib groups (84.4% vs. 84.1%, p-value: 0.84)
- Median TTNT, PFS, and OS were not reached in either group
- Treatment-related adverse events were usually mild, and treatment discontinuation due to adverse events was rare (alectinib 4.5% vs. brigatinib 6.28%)

### Conclusion

- Alectinib and brigatinib had similar clinical benefits when used as the first-line treatment of NSCLC patients with ALK rearrangement in the real world.