# Fast, local NGS test results may allow clinicians to choose optimal first-line therapy

Retrospective study of 525 newly diagnosed stage IV NSCLC patients harboring actionable oncogenic drivers reveals that genomic profiling-directed therapy may improve patient outcomes.[1]

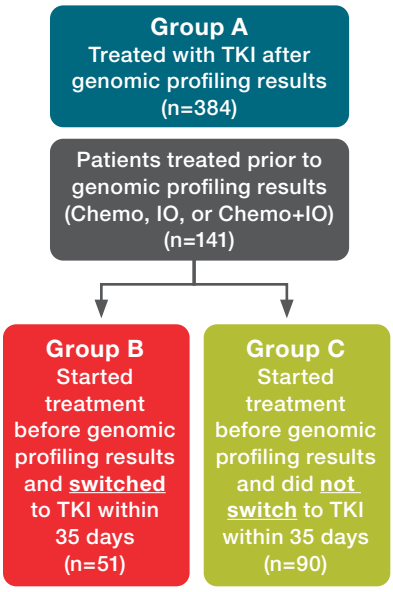


**Figure 1.** Patient cohort.

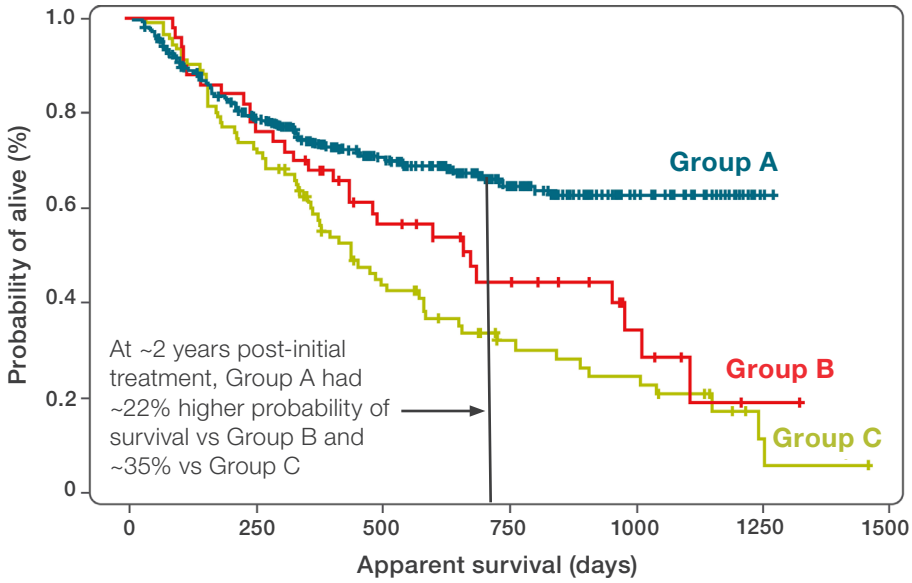


**Figure 2.** Group B (n=51), who switched to TKI treatment within 35 days, demonstrated a median apparent survival (AS) of 672 days. Group C (n=90) who did not switch demonstrated a median AS of 435 days. A median AS was not reached for Group A (control group, n=384) because survival extended beyond the data cut-off date in more than half of patients.

The findings suggest that treatment outcomes were significantly compromised in patients who initiated treatment (Chemo, IO or Chemo+IO) before their genomic profiling results were reported, compared to patients who initiated treatment after receiving their genomic profiling results.

This real-world data provides evidence that testing TAT may have a direct impact on treatment selection and clinical outcomes.

# Recent real-world study in community hospital setting reported amplicon-based NGS can provide genomic profiling results with a routine TAT of 3-days or less.[2]

This study evaluated the feasibility of in-house fast NGS in a streamlined workflow at a community hospital on 578 consecutive solid tumor samples covering different cancer types, including lung cancer, melanoma, and colorectal carcinoma.

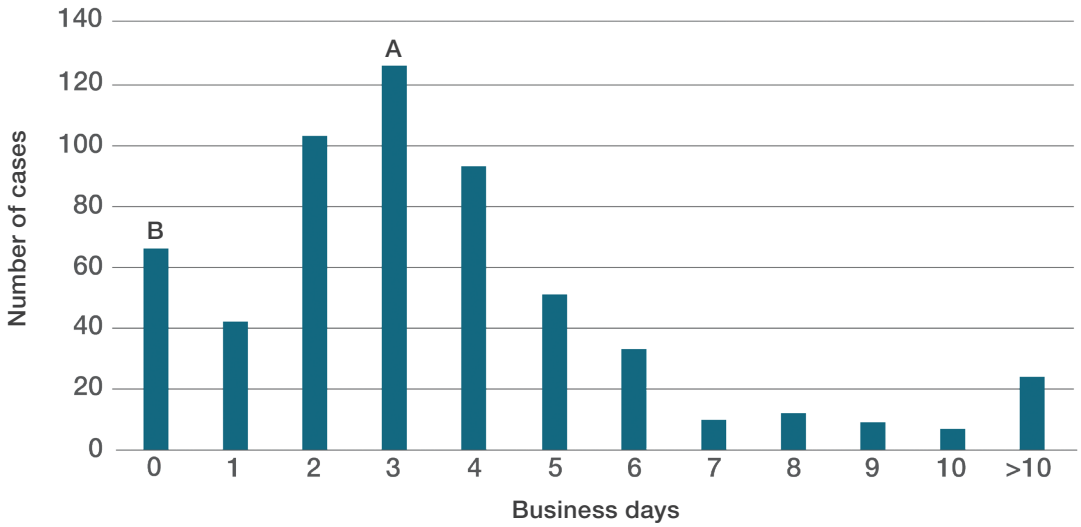


**Figure 3.** Results demonstrated, (**A**) a median TAT of three (3) business days for all cases, regardless of tumor type, and (**B**) 66 molecular reports (11%) were issued simultaneously with diagnosis.


**Figure 4.** Study demonstrated fast NGS with existing histopathology service can provide pathologists with genomic biomarker data in parallel to histologic diagnosis.

Genomic profiling by fast NGS in routine practice may improve patient outcomes.

Chemo = Chemotherapy
IO = Immunotherapy
NSCLC = Non-small cell lung cancer
NGS = Next generation sequencing
TAT = Turnaround time
TKI = Tyrosine kinase inhibitors


1. Smith RE, et al. *Journal of Clinical Oncology* (2022), doi: 10.1200/JCO.2022.40.16_suppl.1530
2. Sheffield BS, et al. *Current Oncology* (2022), doi: 10.3390/curroncol29030113


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