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Abstract (250 words)

Purpose: to extend lives of late stage lung cancer patients through new personalized therapies targeting specific molecular biomarkers identified through multi-step biospecimen assessment

Problem: Advances in drug development and genetic sequencing prompted dramatic shifts in cancer care, requiring clinicians to comprehend multiple options for quality tissue assessment and the impact of multiple tests on treatment decisions. Hospital communication among surgeons, pathologists, and oncologists were paper intensive, laborious, and dependent upon faxes and phone calls between physicians and the lab as multiple orders were often required for testing lung tissue samples for epidermal growth factor receptors (EGFR) and anaplastic lymphoma kinase (ALK)--with inconsistencies across the physician network in regard to molecular testing and targeted therapies as recommended in the latest guidelines for non-small cell lung cancer (NSCLC) from the National Comprehensive Cancer Network (NCCN)—the gold standard for cancer care.

Baseline chart audits of retrospective NSLC patients (2011) showed 28% compliance to research-based NCCN protocols. To fast track systemic shifts in evidence-based clinical practice that expanded the use of targeted therapies for NSCLC patients, we automated EMR “triggers “and enhanced pathology and tumor registry software as the framework for screening, tissue assessment, reporting, and clinical decision-making. Expanding quality Continuing Medical Education (CME) improved clinical competence across multidisciplinary physician networks; physician adherence to NCCN guidelines improved to over 90% by the end of 2014, as measured by chart audits of active patients and documentation in project-related enhancements to Tumor Registry Abstract records.

Implications: improved survivorship for late stage NSCLC patients.

References

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