

**Submission for the UB Community Health Equity Research Institute's First Annual  
Research Day**

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**Title: Precision Medicine Initiatives for Individuals with Non-Small Cell Lung Cancer (NSCLC): A narrative review**

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**Abstract**

Precision medicine initiatives are providing opportunities for molecular testing and targeted therapy in individuals who are facing devastating illness, including non-small cell lung cancer (NSCLC). These promising methods have proven to prolong life in individuals with NSCLC who carry an actionable genetic mutation in their tumor tissue. However, research indicates that there are barriers to patients' receipt of these initiatives that reflect social determinants of health (SDOH). In this review, five databases were searched, and appropriate articles were collected from the last ten years in the U.S. Data collected included individual demographics, specific diagnosis, status of targeted genomic testing, and receipt of targeted therapy. All studies involved database review of insurance claims or medical records, and were retrospective in nature. Analysis revealed that individuals with NSCLC received less genomic testing and targeted therapy if they were of a lower socioeconomic status, had public health insurance or no health insurance, were of Black racial background, and/or lived in rural areas. Therefore, the implication is that social determinants of health impact the receipt of precision medicine initiatives for individuals with lung cancer. Gaining knowledge of this impact is the first step in mitigating inequities.