Young Patients With Lung Cancer—An Understudied Population

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One of the hallmarks of our progress in treating lung cancer, as well as many other malignancies, has been a growing recognition that patient outcomes can be markedly improved by recognizing distinct disease subgroups and treating them with tailored strategies rather than pooling all disease occurrences together and missing the opportunity to maximize therapy effectiveness for unique populations. This granular view of patient populations is defined by an interplay of clinically and molecularly defined variables. While elderly patients with lung cancer have been the subject of a growing number of studies that have led to a greater understanding of the best treatment options for their demographic, we have yet to recognize the potentially unique clinical and molecular features of young patients with lung cancer.

In the current issue of *JAMA Oncology*, Sacher and colleagues attempt to characterize a particularly understudied population of patients with lung cancer on the youngest end of the spectrum by evaluating the molecular characteristics and survival of over 2200 patients with non–small-cell lung cancer treated over 12 years at Dana-Farber Cancer Institute and had molecular testing for 5 of the most clinically relevant molecular markers. Their findings reveal that patients younger than 50 years are significantly more likely than older patients to have a driver mutation for which there is a growing array of evidence-based targeted therapies. In the absence of an identifiable treatable mutation, the youngest patients in the cohort studied by Sachar and colleagues also have a comparably unfavorable survival, suggesting that the clinical behavior of cancers in young patients is particularly aggressive.

While these results and conclusions are limited by the referral bias to a center of excellence to which younger patients and those with an identified mutation likely gravitated, almost certainly creating a skewed study population that is not necessarily generalizable to the broader lung cancer population, this work provides an invaluable early step toward identifying the youngest patients with lung cancer as a subgroup that deserves more study and special consideration as a distinct clinical demographic most likely to benefit from a more extensive search for targetable driver mutations.

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