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Select Excerpts from the Interview

**Track 1**

**DR LOVE:** Would you comment on the issue of multiplex genomic testing and the approach used in your oncology group at Mass General?

**DR FIDIAS:** The platform we use is called SNaPshot. It’s a multiplex DNA sequencing platform that began as a research tool in an effort to identify oncogenic drivers, with EGFR being the most frequent. Several years ago we thought it should not be simply a research tool. We believed it should be integrated into clinical practice because...
being applicable strictly as a research tool requires a protocol and can therefore only be utilized in 15% to 20% of the population. 

We believe that every patient with lung cancer who comes into the clinic should undergo genotyping. The SNapshot platform has now been supplemented by FISH analysis, primarily for the ALK-translocated gene and, more recently, ROS1 rearrangement. We also test everyone who comes to the clinic for MET and other less common rearrangements and mutations. 

This model proved to be successful in clinical practice (Sequist 2011; [3.1]). We obtain a lot of data, many of which are unexpected — you would not have predicted these patients to have tumors with these types of mutations. The model has now spread to other disease centers, where breast cancer and colorectal cancer are screened. 

### 3.1 Multiplex Genotyping of Non-Small Cell Lung Cancer (NSCLC) in Clinical Practice

“While widely agreed that it is important to identify patients with EGFR and ALK given the availability of effective therapeutics, it is also noteworthy that in a short time frame at a single institution, we identified over 30 patients with less common mutations like BRAF, PIK3CA and HER2, which also have relevant candidate targeted therapies. 

Among the patients with advanced or recurrent NSCLC seen within these 15 months, 22% began a genotype-specific therapy in response to SNPshot results. We anticipate that this proportion should increase further in the future, as the scope of genotype-specific clinical trial efforts is rapidly broadening.... Overall, we have demonstrated that broad clinical genotyping with SNapshot can be tightly integrated into clinical practice and we believe it can make a real difference for patients.”

suppression and fatigue. A motivated person can get through it, but it’s too early to tell whether nab paclitaxel should replace regular paclitaxel.

Track 15

DR LOVE: Would you discuss the SELECT study, which you worked on with Dr Lecia Sequist? What did you report, and how do you interpret those results?

DR FIDIAS: This is an adjuvant trial for patients with EGFR mutation-positive disease, up to Stage IIIA, who can receive erlotinib either immediately if they don’t receive chemotherapy or at the end of chemotherapy if the standard treatment for their tumor stage is to receive adjuvant chemotherapy after resection. It’s a single-arm Phase II study, so it will not be conclusive, but the disease-free survival rate appears to be remarkably good at 94% after 2 years (Neal 2012; [3.3]).

It’s still early for this population, and we have to see how the results fall along historical lines, but I would not be surprised if this regimen became a new standard. My sense is that EGFR TKI therapy will be moved earlier in the treatment algorithm. It’s effective, and I can envision using TKIs in both the adjuvant and the metastatic settings. Eventually we’ll need a Phase III study to find out whether we have a new standard. Until such time, I would not use this approach outside of a trial setting.

## SELECT PUBLICATIONS

Heist RS et al. Phase II trial of carboplatin, Abraxane, and bevacizumab in NSCLC. Proc ASCO 2011; Abstract e18016.


