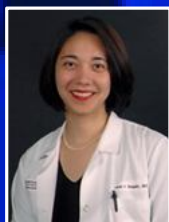


# Developing Personalized Strategies for Managing Acquired EGFR TKI Resistance: Data on Re-Biopsying Tumors



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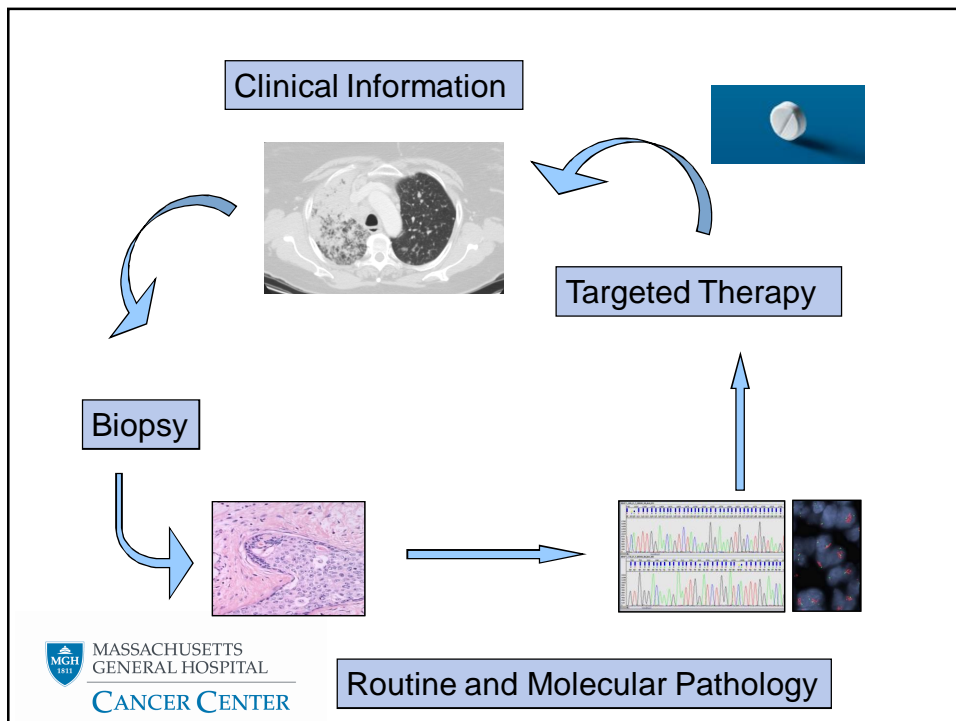
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# Disclosures

- Compensated consulting: GSK
- Uncompensated consulting: Boehringer-Ingelheim, Merrimack Pharmaceuticals, Daiichi-Sankyo



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RESEARCH ARTICLE

CANCER

## Genotypic and Histological Evolution of Lung Cancers Acquiring Resistance to EGFR Inhibitors

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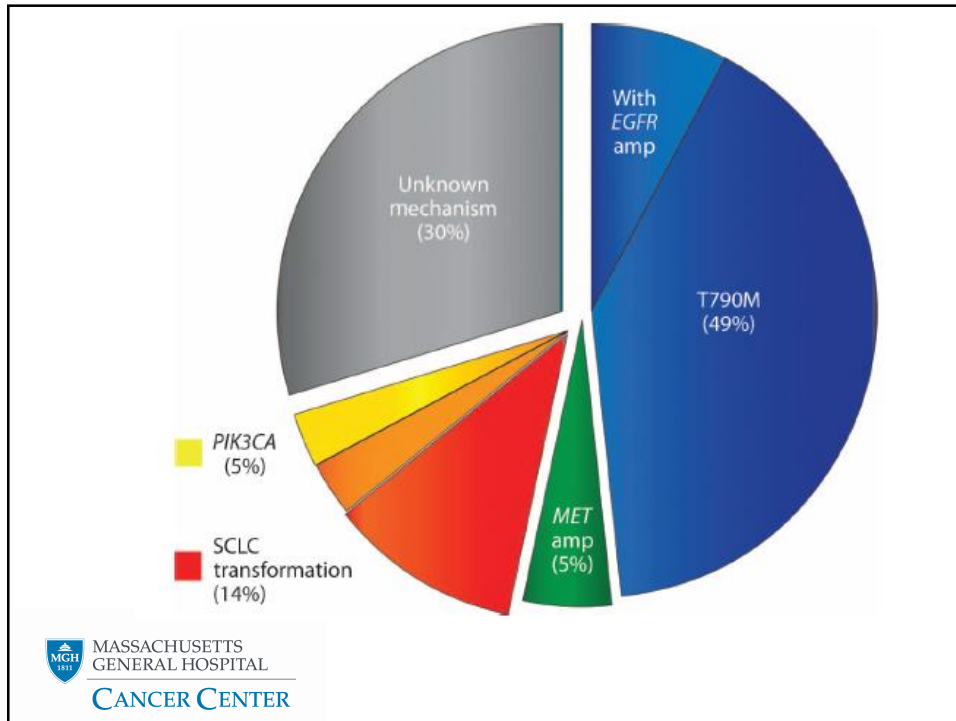
## Study Design

- Biopsied 37 patients with EGFR mutations and acquired resistance to EGFR TKI therapy
- Compared pre- and post-resistant tumor samples to better understand resistance



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### SCLC Transformations

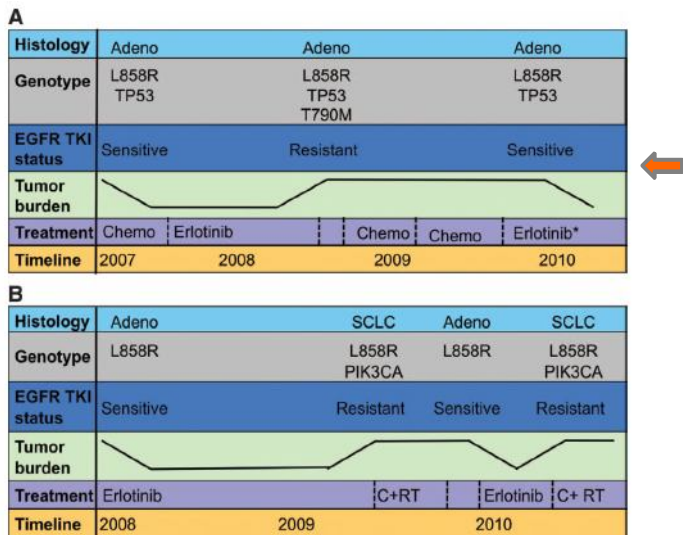
**A**

	H & E	Synaptophysin
Pre-Rx		
Resistant		

Two axial CT scans of the chest are shown on the right. The top scan shows a primary lung lesion (yellow arrow) and a mediastinal lymph node (white arrow). The bottom scan shows the same patient after treatment, with the primary lesion (yellow arrow) and lymph node (white arrow) still present.

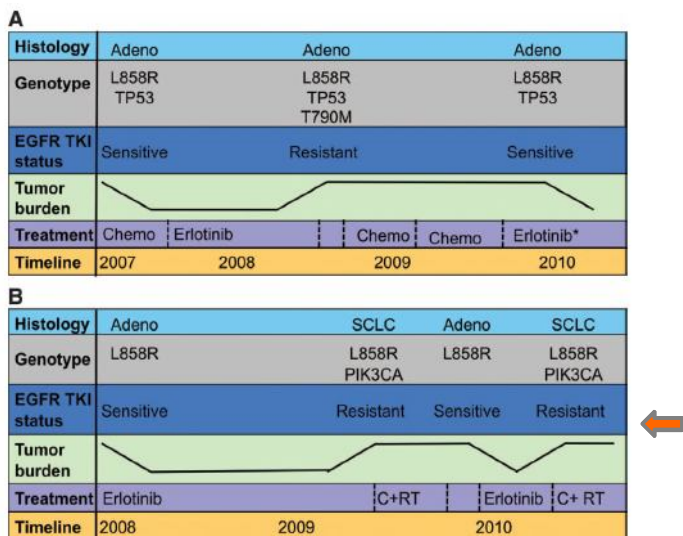
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Waxing and  
Waning  
Resistance  
Mechanisms  
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## Summary

- Acquired resistance to EGFR TKIs is a complicated phenomenon
- Repeat biopsies (sometimes multiple over the course of time) can be informative:
  - May help choose a clinical trial that makes most sense for a patient
  - May help tell if repeat trial of erlotinib is likely to work
- Research is ongoing to understand SCLC  $\Delta$