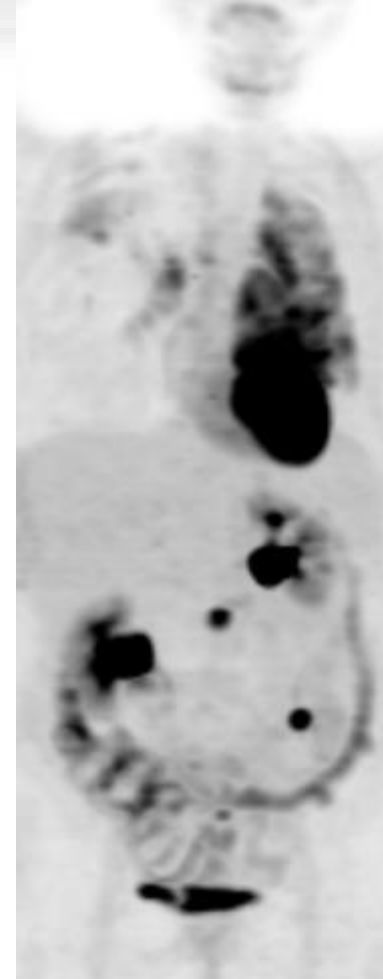


## *Case 2: Molecular Testing*

- **42-year-old woman never-smoker presents with dry cough.**
- **PS=1.**
- **Stage IV NSCLC-adenocarcinoma histology of left lower lobe metastatic to lymph nodes and bone. Brain MRI with 4 small 2-5 mm brain metastases.**
- **The patient is asymptomatic from her brain metastases.**
- **Tissue is insufficient for molecular testing. The patient is minimally symptomatic from her lung cancer.**



## *Case 2: Molecular Testing*

**Question 1: You want to order molecular testing for this patient with insufficient tissue on initial biopsy? What do you choose for this minimally symptomatic patient?**

- 1. Repeat tissue biopsy for EGFR-mutation by PCR, ALK FISH and ROS1 FISH**
- 2. Repeat tissue biopsy for broad genomic profiling of an over 300 gene-panel including all relevant actionable genomic aberrations of lung adenocarcinoma (EGFR, ALK, ROS1, MET, RET, HER2, etc)**
- 3. Plasma biopsy for a 70 gene-panel including relevant actionable genomic aberrations of lung adenocarcinoma (EGFR, ALK, ROS1, MET, RET, HER2, etc).**
- 4. No molecular testing. Start chemotherapy.**

## *Case 2: Molecular Testing*

**A repeat tissue biopsy demonstrates an EGFR Exon 19 deletion**

**Question 2: Would you irradiate the 4 subcm asymptomatic brain lesions prior to initiating systemic therapy?**

- 1. Yes, gamma knife**
- 2. Yes, whole brain radiation**
- 3. No**

## *Case 2: Molecular Testing*

**You decide not to radiate the subcm,  
asymptomatic brain metastases.**

**Question 3: Which treatment would you choose for  
this patient for firstline systemic treatment for this  
patient with EGFR Exon 19 del Stage IV Lung  
Adenocarcinoma?**

- 1. Erlotinib**
- 2. Gefitinib**
- 3. Afatinib**
- 4. Erlotinib and bevacizumab**
- 5. Osimertinib**