University Cancer Center - New Patient Consultation Report

IDENTIFYING INFORMATION & REASON FOR CONSULTATION:
Ms. Rossi is a 54-year-old female referred by Dr. Green for management of newly diagnosed Stage IV Lung Adenocarcinoma with brain metastases, found to harbor an EGFR Exon 19 deletion.

HISTORY OF PRESENT ILLNESS:
Ms. Rossi reports being in her usual state of excellent health until approximately early April 2023, when she began experiencing a persistent, dry cough and intermittent shortness of breath, particularly with exertion (e.g., climbing stairs). She initially attributed this to allergies or a lingering viral illness. Over the next few weeks, the cough worsened, and she developed mild left-sided chest ache and noticeable fatigue. In early May 2023, she experienced an episode of transient right-sided facial numbness and tingling lasting about 20 minutes, which prompted her to seek medical attention with her PCP, who referred her to Pulmonology.

Dr. Green ordered a chest X-ray which showed a left upper lobe opacity. A subsequent CT scan of the chest confirmed a suspicious mass and revealed concerning mediastinal lymph nodes. Further staging workup was pursued.

STAGING WORKUP & DIAGNOSTIC FINDINGS:

- **CT Chest/Abdomen/Pelvis with Contrast (May 19, 2023):**
    - *Chest:* Irregular, spiculated 3.8 x 3.2 cm mass in the apicoposterior segment of the left upper lobe (LUL). Significant mediastinal lymphadenopathy involving left hilar (station 10L), subcarinal (station 7), and bilateral paratracheal (stations 4L, 4R) regions, largest node measuring 2.1 cm (station 4L). Multiple small bilateral pulmonary nodules (<6 mm), likely metastatic. No pleural effusion.
    - *Abdomen/Pelvis:* No evidence of metastatic disease in the liver, adrenal glands, or other intra-abdominal/pelvic organs. Osseous structures unremarkable.
- **PET/CT (May 23, 2023):**
    - Intense FDG uptake within the LUL primary mass (SUVmax 14.5).
    - Intense uptake corresponding to the noted hilar and mediastinal lymph nodes (SUVmax 11.8 in station 4L).
    - Moderate uptake in several of the small bilateral pulmonary nodules (SUVmax 4.0-6.5).
    - No abnormal uptake below the diaphragm.
    - *Unexpected finding:* Several foci of intense FDG uptake within the brain parenchyma (left frontal lobe, right parietal lobe – SUVmax up to 12.0). Recommendation for dedicated Brain MRI.
- **Brain MRI with and without Contrast (May 26, 2023):**
    - Revealed three distinct ring-enhancing lesions consistent with metastases:
        - Left frontal lobe lesion measuring 1.8 cm with significant surrounding vasogenic edema and mild mass effect on the left lateral ventricle.
        - Right parietal lobe lesion measuring 1.1 cm with moderate surrounding edema.
        - Right cerebellar hemisphere lesion measuring 0.8 cm with minimal edema.
- **Bronchoscopy with EBUS-TBNA (Endobronchial Ultrasound-Guided Transbronchial Needle Aspiration) (May 30, 2023):**

    - Samples obtained from Station 4L and Station 7 lymph nodes.
    - **Pathology Report (June 2, 2023):** Cytology and cell block preparations show **Metastatic Adenocarcinoma**. Immunostains positive for TTF-1 and Napsin-A, confirming lung primary origin. Morphology is consistent with adenocarcinoma.
- **Molecular Testing (Tissue NGS Panel - Station 4L sample; Report Date June 4, 2023):**
    - **EGFR Mutation Detected:** Exon 19 deletion (specifically, p.L747_T751delinsP). Allele frequency 35%.
    - **Other Drivers:** KRAS, ALK, ROS1, BRAF, MET Exon 14, RET all Negative/Wild-Type.
    - **Tumor Mutation Burden (TMB):** 3 mutations/Megabase (Low).
    - **Microsatellite Status:** Stable (MSS).
- **PD-L1 Immunohistochemistry (IHC) (Dako 22C3 pharmDx):**
    - **Tumor Proportion Score (TPS): 0%**
    - **Combined Positive Score (CPS): < 5**
    - **Immune Cell (IC) Score: 0**

SUMMARY OF DIAGNOSIS: Stage IV (cT2a N3 M1c - Lung, Brain) Lung Adenocarcinoma, EGFR Exon 19 deletion positive, PD-L1 negative. DoDx 19.05.2023

PAST MEDICAL HISTORY:

- Hypothyroidism (diagnosed age 45, stable on Levothyroxine)
- Seasonal Allergies
- No history of smoking (Never-smoker)
- No significant surgical history
- Family History: Mother died of breast cancer age 68. No family history of lung cancer.

SOCIAL HISTORY: Works as a librarian. Married, supportive husband. Two adult children. Denies alcohol or illicit drug use.

MEDICATIONS PRIOR TO ONCOLOGY CARE:

- Levothyroxine 75 mcg PO Daily
- Loratadine 10 mg PO PRN allergies

REVIEW OF SYSTEMS (Targeted):

- Constitutional: Reports fatigue (+), unintentional weight loss of ~5 lbs over past month. Denies fevers, chills.
- Neuro: Denies headache, seizures, focal weakness, visual changes *currently*. Reports the one episode of transient R facial numbness in May. No recurrence.
- Respiratory: Persistent dry cough (+), mild exertional dyspnea (+), L chest ache (+, intermittent, dull). Denies hemoptysis.
- Other systems reviewed and are negative.

OBJECTIVE:

- Vitals: T 37.2C, BP 128/78, HR 82, RR 16, SpO2 97% RA. Wt 65 kg. ECOG PS 1.

- Exam: Alert, oriented x4, appears stated age, in no acute distress. HEENT: No facial asymmetry. Pupils equal, round, reactive. EOMI. Mucous membranes moist. Neck: Supple, no palpable adenopathy. Lungs: Decreased breath sounds LUL anteriorly. No wheezes/crackles. Cor: Regular rate/rhythm, no murmurs. Abd: Soft, non-tender. Ext: No edema. Neuro: Cranial nerves II-XII grossly intact. Motor strength 5/5 throughout. Sensation intact to light touch. Cerebellar testing normal. Gait steady.

ASSESSMENT:
Ms. Rossi is a 54-year-old never-smoker with newly diagnosed Stage IV Lung Adenocarcinoma driven by an EGFR Exon 19 deletion. She has metastatic disease involving mediastinal lymph nodes, contralateral lung nodules, and importantly, three brain metastases, one of which is causing significant vasogenic edema. Her PD-L1 expression is negative. Her performance status is good (ECOG 1).

PLAN:

1. **Systemic Therapy:**
    - Given the presence of an activating EGFR mutation (Exon 19 deletion), the standard of care and most effective first-line treatment is a third-generation EGFR tyrosine kinase inhibitor (TKI).
    - **Initiate Osimertinib (Tagrisso) 80 mg PO once daily.** Prescription provided today, start of today! Patient educated extensively on administration, potential side effects (rash, diarrhea, stomatitis, paronychia, QTc prolongation, interstitial lung disease - though rare), importance of adherence, and when to call the clinic. Dispensed starter pack and information booklet.
2. **Management of Brain Metastases:**
    - Osimertinib has excellent CNS penetration and efficacy against EGFR-mutant brain metastases. However, given the size of the left frontal lesion (1.8 cm) and associated edema causing mild mass effect, upfront local therapy is warranted for optimal control and symptom prevention.
    - **Neurosurgery Consultation:** Referral placed today for urgent evaluation regarding Stereotactic Radiosurgery (SRS) to all three brain lesions. Aim to coordinate SRS within 1-2 weeks, ideally shortly after starting Osimertinib.
    - **Dexamethasone:** Start Dexamethasone 4 mg PO BID immediately to manage vasogenic edema from the brain metastases. Provide prescription. Discussed side effects (insomnia, hyperglycemia, mood changes, increased appetite) and plan for gradual taper as tolerated after SRS and response to Osimertinib, guided by neuro-oncology/neurosurgery and repeat imaging. GI prophylaxis (e.g., Pantoprazole 40mg daily) also prescribed while on steroids.
3. **Supportive Care:**
    - Continue Levothyroxine 75 mcg daily.
    - Prescription for Ondansetron 4mg ODT q8h PRN nausea (primarily for potential steroid or initial TKI side effects).
    - Prescription for Loperamide 2mg capsules PRN diarrhea (with specific instructions on usage for potential Osimertinib-induced diarrhea).
4. **Monitoring:**
    - Close clinical follow-up: Return to clinic in 1 week after starting Osimertinib for toxicity check and steroid assessment. Then q2-3 weeks initially.
    - Labs: Baseline CBC, CMP, Magnesium, ECG (for QTc) obtained today. Repeat labs (including LFTs, electrolytes) in 1-2 weeks, then monthly. TSH q3 months.

- Imaging:
    - Repeat Brain MRI 1 month post-SRS, then q2-3 months initially to assess response and monitor edema.
    - First restaging CT Chest/Abdomen/Pelvis approximately 8 weeks after starting Osimertinib.

5. **Patient Education & Resources:** Provided extensive verbal and written information about diagnosis, treatment plan, side effect management. Contact information for clinic nurse navigator provided. Encouraged supportive care resources (social work, nutrition).

PROGNOSIS: Discussed prognosis with Ms. Rossi and her husband. Explained that while Stage IV lung cancer is not typically curable, EGFR-targeted therapy like Osimertinib can provide significant and durable disease control, often for years, including control of brain metastases. Emphasized the importance of adherence and communication.

FOLLOW-UP: Clinic visit in 1 week. Neurosurgery appointment pending scheduling.

_____ M.D., PhD.
Evelyn Reed, MD, PhD (Electronically Signed)
Thoracic Medical Oncology

PATIENT: Rossi, Isabella Francesca
MRN: SYN014 **DOB:** 1969-03-12
GENDER: Female
DATE OF CONSULTATION: June 5, 2023
CONSULTING PHYSICIAN: Dr. Evelyn Reed, MD, PhD (Thoracic Oncology)
REFERRING PHYSICIAN: Dr. Samuel Green (Pulmonary Medicine)

FOLLOW UP on July 6, 2023

Good tolerability of Osimertinib, no sign of progression. Continue treatment. New prescription.

FOLLOW UP on September 10, 2023

Good tolerability of Osimertinib, no sign of progression. Continue treatment. New prescription.