DISCHARGE SUMMARY

PATIENT INFORMATION:

- **ATTENDING PHYSICIAN:** Dr. Rebecca Lin, MD
- **NAME:** Michael Garza (*01/07/1959)
- **ID:** SYN079

PRIMARY DIAGNOSIS: Stage IV EGFR Exon 19 deletion-positive non-small cell lung adenocarcinoma with brain metastases

SECONDARY DIAGNOSES:

1. Status-post focal seizure with secondary generalization
2. Post-ictal encephalopathy (resolved)
3. Hypertension
4. Hyperlipidemia
5. Gout

REASON FOR ADMISSION: Mr. Garza presented to the emergency department after experiencing a witnessed tonic-clonic seizure at home. Family reported approximately 2 minutes of left arm jerking followed by generalized convulsions lasting approximately 90 seconds with post-ictal confusion.

ONCOLOGIC HISTORY:

Date of Diagnosis: October 5, 2021

Presenting Symptoms: Headaches, intermittent confusion, and word-finding difficulties. Brain MRI revealed multiple enhancing lesions. Subsequent chest CT showed a 3.2 cm right middle lobe mass.

Diagnostic Workup:

- Brain MRI (10/02/2021): Multiple enhancing lesions (largest 2.5 cm in left frontal lobe)
- CT-guided biopsy of lung mass (10/08/2021): Non-small cell lung adenocarcinoma
- Molecular Testing:
  - EGFR: Exon 19 deletion positive
  - ALK, ROS1, BRAF, MET, RET, NTRK: Negative
  - PD-L1 (22C3): TPS 60%, CPS 65%, IC 15%

Treatment History:

- First-line osimertinib 80mg daily initiated 10/27/2021

- Stereotactic radiosurgery to 4 brain lesions (11/10/2021)
- Whole brain radiation therapy deferred due to good response to osimertinib

Treatment Response:

- Primary lung tumor decreased from 3.2 cm to 0.9 cm (72% reduction)
- Brain metastases: Near-complete resolution of all lesions
- Most recent brain MRI (01/15/2025): No evidence of active brain metastases, residual enhancement in previously treated areas

Prior Seizure History: One prior seizure at initial presentation (October 2021), controlled on levetiracetam until patient self-discontinued medication approximately 2 months ago.

HOSPITAL COURSE:

Mr. Garza was admitted following a generalized tonic-clonic seizure. Initial brain MRI showed no new metastatic lesions but increased FLAIR signal and edema surrounding two areas of previously treated brain metastases in the left frontal and right temporal regions.

EEG demonstrated left frontal epileptiform discharges consistent with seizure focus. Levetiracetam was restarted at an increased dose (1000mg BID) with addition of lacosamide (100mg BID) for dual antiepileptic coverage. No further seizures occurred during hospitalization.

Neurosurgery consultation deemed no surgical intervention was necessary given the absence of new metastatic lesions. Dexamethasone was initiated temporarily for perilesional edema with rapid improvement in symptoms.

The patient's osimertinib was continued without interruption throughout hospitalization. CT chest/abdomen/pelvis performed during admission showed continued excellent disease control with stable small residual primary tumor and no evidence of extracranial metastatic disease.

By hospital day 15, the patient had returned to his neurological baseline with no residual post-ictal symptoms. Extensive education was provided regarding medication adherence, seizure precautions, and driving restrictions. Patient was discharged on 04/21/2025 in stable condition.

DIAGNOSTIC STUDIES:

Laboratory Studies (04/02/2025):

- Complete Blood Count: Within normal limits
- Comprehensive Metabolic Panel: Normal except for mildly elevated ALT (56 U/L)
- Serum osimertinib level: Subtherapeutic, consistent with reported medication non-adherence
- Toxicology screen: Negative

- Antiepileptic drug levels: Undetectable (consistent with reported discontinuation)

Imaging:

Brain MRI with and without contrast (04/02/2025): No new enhancing lesions. Increased FLAIR signal and edema surrounding previously treated lesions in left frontal and right temporal lobes. No mass effect or midline shift.

CT Chest/Abdomen/Pelvis with contrast (04/04/2025): Right middle lobe primary tumor stable at 0.9 cm. No lymphadenopathy. No evidence of extracranial metastatic disease.

Electroencephalogram (04/03/2025): Left frontal epileptiform discharges. No continuous seizure activity.

DISCHARGE MEDICATIONS:

1. Osimertinib 80mg PO daily
2. Levetiracetam 1000mg PO BID (INCREASED from previous 750mg BID)
3. Lacosamide 100mg PO BID (NEW)
4. Dexamethasone 2mg PO BID with taper: 2mg BID for 5 days, then 1mg BID for 5 days, then discontinue
5. Pantoprazole 40mg PO daily (while on dexamethasone)
6. Lisinopril 20mg PO daily
7. Atorvastatin 40mg PO daily
8. Allopurinol 300mg PO daily

FOLLOW-UP PLAN:

1. Neuro-Oncology: Dr. Rebecca Lin - 04/29/2025 (1 week)
2. Neurology: Dr. David Wong - 04/23/2025
3. Brain MRI - 05/07/2025
4. EEG - 05/07/2025
5. Medication adherence monitoring via electronic pill cap prescribed

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DISCHARGE INSTRUCTIONS:

1. Take all medications as prescribed without interruption
2. No driving until cleared by neurology (minimum 3 months seizure-free)
3. Avoid activities where sudden loss of consciousness would be dangerous
4. Maintain seizure precautions at home (padded furniture edges, no unsupervised bathing)
5. Family member to administer medications and maintain log
6. Return to emergency department for any recurrent seizure activity, new neurological symptoms, or persistent headache

ONCOLOGIC ASSESSMENT:

Mr. Garza has EGFR Exon 19 deletion-positive NSCLC diagnosed in October 2021 with brain metastases as the only site of metastatic disease. His PDL1 status shows high expression (TPS 60%, CPS 65%, IC 15%), though this is less relevant given the presence of the actionable EGFR mutation.

He has demonstrated excellent and sustained response to osimertinib, exceeding the median PFS typically observed in clinical trials (15-19 months). His current seizure episode appears related to perilesional edema surrounding previously treated brain metastases, exacerbated by medication non-adherence, rather than disease progression.

The patient's excellent response to targeted therapy, absence of new metastatic lesions, and control of extracranial disease suggest favorable prognosis with continued osimertinib treatment. However, the recent seizure episode highlights the importance of medication adherence and neurological monitoring.

Brain metastases in EGFR-mutated NSCLC represent a challenging clinical scenario, but osimertinib's enhanced CNS penetration has shown significant efficacy in controlling intracranial disease. With appropriate antiepileptic therapy and improved medication adherence, the patient is expected to maintain good quality of life and continued disease control.

Electronically signed by:
Rebecca Lin, MD
Neuro-Oncology
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