

Patient ID: SYN161 Patient Name: Sandra Kudo Patient Demographics: Female | DOB: 21 August 1974

**Diagnosis**: Non-Small Cell Lung Cancer – Adenocarcinoma

Date Diagnosed: 31 January 2023

Metastatic Site: Bone (left femoral head, L4 vertebra, right humerus)

Mutation: BRAF V600E (confirmed via NGS)

**PD-L1 Status**: TPS <1%, CPS 2, IC 0

Therapy: Dabrafenib 150 mg BID + Trametinib 2 mg QD

**Therapy Initiation**: 22 February 2023

Current Status: Ongoing treatment, sustained partial response

### **INITIAL PRESENTATION & DIAGNOSTICS**

The patient presented with chronic lower back pain, intermittent night sweats, and limited range of motion in her right shoulder. A CT/PET revealed lytic lesions in the humeral head, sacrum, and lumbar spine. MRI spine further demonstrated L4 vertebral body involvement with minimal epidural extension, though without neural impingement.

CT thorax revealed a 3.7 cm LUL mass. Bone biopsy of the right humeral lesion showed metastatic adenocarcinoma. TTF-1+, CK7+, BRAF V600E detected via FoundationOne panel. PD-L1 was low at <1%.

## THERAPEUTIC COURSE

She was promptly initiated on the BRAF/MEK inhibitor combination **dabrafenib** + **trametinib**, with dose modifications after the third cycle due to fevers and rigors. These were self-limited and managed with acetaminophen and temporary dose holds.

#### **Efficacy**:

- Partial response documented at 8-week evaluation (March 2023)
- PET-CT (November 2023): Near-complete metabolic resolution of bone lesions
- MRI spine (Jan 2024): Sclerotic change in L4, no active tumor signal

#### **Toxicities:**

- Grade 1 pyrexia (resolved)
- Grade 2 photosensitivity

 Mild LVEF decline (baseline 63% → 54% in December 2023; asymptomatic, monitored)

# **Adjunct Therapy:**

- Denosumab initiated March 2023
- Orthopedic evaluation deferred surgical stabilization due to good response
- Physiotherapy ongoing for right shoulder mobility

### OTHER MEDICAL HISTORY

- Mild asthma
- Hyperthyroidism (ablated, now hypothyroid on levothyroxine)
- No history of smoking or alcohol abuse
- Vegan diet counseled on protein and calcium intake

### LATEST ASSESSMENTS

**Date** Scan Result
Mar 2024 CT Chest/Abdomen LUL lesion no longer visualized

Feb 2024 Bone scan Increased sclerosis of prior lesions; no new uptake Apr 2025 Echocardiogram LVEF stable at 54%, no wall motion abnormality

#### **CURRENT STATUS AND PLAN**

The patient continues dabrafenib/trametinib with monthly labs and cardiac monitoring. Her quality of life is excellent (ECOG 0), and she is currently working part-time as a high school science teacher.

### **Monitoring Plan:**

- CT/PET every 3 months
- Echocardiogram every 4–6 months
- Consider ctDNA at next visit to monitor for emerging resistance clones
- Discussion of long-term continuation vs intermittent treatment strategy pending upcoming scan

**Author**: Oncology Fellow, Targeted Therapy Unit

Attending Review: Consultant, Molecular Lung Oncology

Report Date: 14 April 2025