

Julia Hofmann [Patient Identifier SYN166]

Date of Birth: 17 February 1965

Diagnosis: Metastatic Non-Small Cell Lung Cancer (NSCLC), Adenocarcinoma

Stage: IVB at diagnosis (Liver and bone metastases)

Diagnosis Date: 19 December 2022

Mutation Status: *KRAS G12V mutation positive*

PD-L1 Expression: TPS 75%, CPS 78, IC 2+

Initial Treatment Regimen: Pembrolizumab 200 mg IV every 3 weeks

Start of Therapy: 10 January 2023

1. Chief Complaint at Presentation:

Initial referral to thoracic oncology for progressive fatigue, anorexia, and right upper quadrant abdominal discomfort. Imaging prompted by rising liver enzymes and persistent back pain revealed a primary lung mass and widespread metastatic disease.

2. Diagnostic Workup:

Imaging:

- **CT Chest/Abdomen (Dec 2022):**
 - 3.6 cm spiculated RUL mass
 - Multiple hypodense liver lesions (segment IV, VIII)
 - Lytic lesion in L2 vertebral body and right iliac crest
- **MRI Brain (Dec 2022):** Negative for CNS involvement

Biopsy:

- CT-guided biopsy of liver lesion: adenocarcinoma, TTF-1+, Napsin A+, CK7+, consistent with lung origin.

Molecular Profile (Guardant360 & tissue-based NGS):

- *KRAS G12V mutation positive*
 - Negative for EGFR, ALK, ROS1, MET, RET, NTRK
 - PD-L1 IHC: TPS 75% via 22C3 assay
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3. Treatment Course and Response:

Given her high PD-L1 expression and lack of actionable mutations, she was initiated on single-agent **pembrolizumab** in January 2023.

Key milestones:

- **March 2023:** Radiographic partial response (~45% reduction in tumor burden)

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- **July 2023:** PET-CT showed resolution of FDG activity in liver lesions
- **December 2023:** Continued stable disease, ECOG 0
- **March 2024:** Bone scan – no new lesions, sclerotic changes noted at L2

She has now completed 18 cycles of pembrolizumab with excellent tolerability. No irAEs observed to date.

4. Comorbid Conditions:

- Osteopenia (DXA T-score -1.8, started calcium + D3)
 - Mild anxiety (on sertraline)
 - Former smoker, quit 2009, 35 pack-years
 - Migraine with aura, stable
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5. Current Labs (April 2025):

Test	Value
Hemoglobin	11.8 g/dL
AST/ALT	28/32 U/L
ALP	88 U/L
Creatinine	0.9 mg/dL
TSH	2.1 mIU/L
CEA	2.4 ng/mL

6. Plan:

- Continue pembrolizumab up to 35 cycles or until progression
 - Monitor for late irAEs (e.g. thyroiditis, pneumonitis)
 - Repeat CT chest/abdomen/pelvis every 3 months
 - Bone health: repeat DXA mid-year
 - If progression occurs: Consider platinum doublet or clinical trial if eligible
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Signed by: Oncology Consultant, Lung Cancer Division

Date: 14 April 2025