Discharge Summary after Suspected irPneumonitis

Patient: Peter Day-Hewis (male) ID: SYN115 born Jan 03, 1954

Discharge diagnosis: Resolved Acute Hypoxemia and Cough, Suspected Pembrolizumab-induced Pneumonitis (Grade 2) - Treated Empirically.

1. Oncological Diagnosis

- **Primary:** NSCLC, Adenocarcinoma, Stage IVB (cT2aN2M1b), diagnosed July 2022.
- **Histology:** Adenocarcinoma (Liver Biopsy); TTF-1+.
- **Molecular:** Wild-Type (EGFR/ALK/ROS1/BRAF/KRAS etc negative).
- **PD-L1 (IHC 22C3):** TPS 75%, CPS 80, IC Score 3/+.
- **Imaging (Baseline July 2022):** 2.5cm LUL primary, mediastinal nodes, multiple bilobar hepatic metastases (largest 4.5cm). Brain MRI negative.
- **Recent Imaging (July 15, 2023 - prior to admission):** Stable partial response (liver mets significantly smaller, primary stable/smaller).

2. Treatment History

- **Immunotherapy:** Pembrolizumab 200 mg IV q3wks (Started 08/10/2022, Ongoing prior to admission - Cycle 16 received Aug 1, 2023). Temporarily held.
- **Palliative RT:** None.
- **Bone-targeted:** Not applicable.

3. Current Admission (Suspected irPneumonitis)

- **Presentation:** Patient presented to ED with 5-day history of progressive non-productive cough and worsening exertional dyspnea (baseline ECOG 0, now SOB walking short distances). Denied fever, chills, chest pain, sputum production, sick contacts. Last Pembrolizumab infusion was 19 days prior.
- **Workup:**
    - Vitals: T 37.3, HR 95, RR 22, SpO2 91% on room air (improved to 95% on 2L NC).
    - Exam: Bibasilar fine inspiratory crackles noted. Otherwise unremarkable.
    - Labs: WBC 8.9, Hgb 13.8, Plt 240. CMP normal. Procalcitonin <0.1. BNP normal. COVID-19/Flu/RSV PCR negative.
    - Chest X-ray: Bilateral interstitial opacities, slightly more prominent than prior comparisons.
    - **CT Chest Angiogram (CTA):** No pulmonary embolism. Bilateral patchy ground-glass opacities and subtle interstitial thickening, predominantly peripheral and lower lobe distribution, appeared new/worsened compared to July 2023 scan. Findings non-specific but concerning for pneumonitis (drug-induced vs infectious). Primary tumor/mets stable.
    - Pulmonary Consult (Dr. Green): Reviewed case/imaging. Agreed findings suspicious for immune-related pneumonitis (irPneumonitis) Grade 2 given symptoms/hypoxia. Infectious etiology less likely given lack of fever/leukocytosis/procalcitonin/productive cough, but cannot entirely exclude atypical infection. Recommended holding Pembrolizumab, starting empiric high-dose steroids, and considering bronchoscopy if no rapid improvement or diagnostic uncertainty remained high.

- **Treatment:**
    - **Pembrolizumab Held.**
    - Admitted to hospital for monitoring and treatment. Started on supplemental O2 (2L NC, weaned off by Day 3).
    - **IV Methylprednisolone 1 mg/kg/day** initiated empirically for suspected irPneumonitis on Day 1.
    - Bronchoscopy deferred due to rapid clinical improvement.
    - Patient's cough and dyspnea began improving within 24-48 hours of steroid initiation. Hypoxia resolved.
    - Transitioned to **Oral Prednisone 60 mg PO daily** on Day 4.
- **Outcome:** Significant clinical improvement. Cough nearly resolved, dyspnea resolved. Off oxygen. Tolerating PO. Stable for discharge to complete steroid taper as outpatient.

4. Comorbidities

- Mild Hypertension (diet controlled)
- Osteoarthritis (knees)
- Former Smoker (20 pack-years, quit >25 yrs ago)

5. Discharge Medications
New:

- **Prednisone 60 mg PO daily.** Taper schedule provided: Decrease by 10 mg every 7 days (60mg x 1wk, 50mg x 1wk, 40mg x 1wk, 30mg x 1wk, 20mg x 1wk, 10mg x 1wk, 5mg x 1wk, then STOP). **Total taper duration ~8 weeks.**
- **Pantoprazole 40 mg PO daily** (GI prophylaxis while on high-dose steroids).
- **Trimethoprim/Sulfamethoxazole DS (Bactrim DS) 1 tab PO Mon/Wed/Fri** (PCP prophylaxis while on Prednisone >20mg for >4 weeks). *Check Sulfa allergy status - if confirmed rash, use Atovaquone instead*. --> **UPDATE: Patient has Sulfa Allergy (rash). DISCONTINUE Bactrim order. START Atovaquone 1500 mg PO daily.**
  Continued:
- Ibuprofen 400 mg PO PRN knee pain
- Multivitamin
  Temporarily Held:
- Pembrolizumab (Decision on restarting TBD by Oncology based on complete resolution and successful steroid taper - likely permanent discontinuation).

6. Follow-up

- **Oncology:** Dr. K. Tanaka in 1 week (Scheduled: 09/01/2023)
    - Monitor clinical status, steroid tolerance/side effects.
    - Discuss long-term plan regarding immunotherapy (likely discontinued permanently).
    - Plan ongoing cancer surveillance.
- **Pulmonary:** Dr. S. Green in 2-3 weeks (Scheduled: 09/12/2023)
    - Assess respiratory status during steroid taper. Consider repeat PFTs/imaging later if needed.
- **Laboratory Monitoring:** Weekly CBC, CMP, Fasting Glucose while on Prednisone >20mg. Check TSH in 4-6 weeks (monitor for steroid impact / underlying irThyroiditis).

- **Imaging:** Repeat CT Chest in 4-6 weeks to assess resolution of pneumonitis.

7. Patient Education

- Importance of **strict adherence to steroid taper schedule** - DO NOT stop abruptly.
- Signs/symptoms of steroid side effects (hyperglycemia, insomnia, mood changes, increased infection risk).
- Blood glucose monitoring instructions (if diabetic or if hyperglycemia develops).
- Importance of PCP prophylaxis (Atovaquone daily) while on significant steroid dose.
- Signs/symptoms of worsening respiratory status (cough, SOB, fever) requiring immediate medical attention.
- Need to inform all providers about recent pneumonitis episode and steroid use.

8. Lab Values (Baseline Jul 2023 → Pre-admission Aug 2023 → Peak/Adm Aug 2023 → Discharge Aug 2023)

- WBC: 7.0 → 6.8 → 8.9 → 10.5 (steroid effect) k/uL
- Hgb: 14.0 → 13.8 → 13.5 → 13.6 g/dL
- SpO2 (RA): 98% → ~97% → 91% → 97%

Electronically Signed By:
Dr. K. Tanaka (Medical Oncology) - 2023-08-21 16:00
Dr. S. Green (Pulmonary Medicine) - 2023-08-21 14:30
Dr. A. Sharma (Hospital Medicine) - 2023-08-21 11:15

Admission: 2023-08-20 | **Discharge:** 2023-08-21
Physicians: Dr. K. Tanaka (Medical Oncology), Dr. S. Green (Pulmonary Medicine), Dr. A. Sharma (Hospital Medicine)