

Date of Birth: 24 August 1969

Name: Karin Zivkovic

MRN: SYN146

Oncologic Diagnosis Date: 10 August 2023

Primary Malignancy: Non-Small Cell Lung Cancer (NSCLC), Stage IV, Adenocarcinoma

Sites of Metastatic Involvement: Right adrenal gland

Molecular: ROS1 fusion-positive (CD74-ROS1)

PD-L1 IHC (22C3): Tumor Proportion Score (TPS) <1%; Combined Positive Score (CPS) 3; Immune Cell staining (IC) 0

Tx: Entrectinib 600 mg PO daily since 31 August 2023

1. Clinical Background and Presentation

This 54-year-old woman was referred to oncology in summer 2023 following incidental adrenal enlargement on abdominal ultrasound performed for vague flank pain. A dedicated PET-CT revealed a left lower lobe pulmonary mass (3.4 cm) and solitary FDG-avid right adrenal lesion (SUV 7.8). Biopsy of the adrenal mass confirmed metastatic adenocarcinoma consistent with lung primary (TTF-1+, Napsin A+, CK7+).

Comprehensive next-generation sequencing revealed a **CD74-ROS1** gene fusion, and PD-L1 expression was <1%, making immunotherapy unlikely to yield optimal response. No KRAS, EGFR, BRAF, or MET alterations were identified. ALK, RET, and NTRK were negative.

2. Targeted Therapy and Treatment Course

The patient began treatment with **entrectinib**, a potent ROS1/TRK/ALK inhibitor, in August 2023. Tolerability has been excellent with minimal interruptions.

Radiographic Response:

- CT Chest/Abdomen (November 2023): Partial response (47% reduction in target lesions)
- CT (February 2024): Further reduction in adrenal lesion from 3.6 cm to 1.2 cm; primary mass now reduced to 1.1 cm. No new lesions detected

Treatment-related adverse effects:

- Mild dizziness (Grade 1), transient during the first 2 weeks
- Grade 1 weight gain (4.1 kg, suspected fluid-related, managed with dietary sodium restriction)
- No evidence of CNS involvement to date (MRI brain pre-treatment negative)

3. Relevant Medical History

- Asthma (mild intermittent, salbutamol PRN)
 - Migraine with aura (treated with sumatriptan)
 - Vitamin B12 deficiency (on injections)
 - Hypothyroidism (levothyroxine 88 mcg daily)
 - Past surgical history: Appendectomy (2006)
-

4. Laboratory and Monitoring Data

Most Recent Labs (April 2025):

- Hemoglobin: 12.7 g/dL
- AST/ALT: 22/25 U/L
- Creatinine: 0.8 mg/dL
- ROS1: Fusion detected (CD74 exon 6 – ROS1 exon 34)
- PD-L1: TPS <1%, CPS 3, IC 0

Next scheduled imaging: June 2025 (PET-CT)

5. Ongoing Plan

- Continue entrectinib at 600 mg daily
 - Monitor for CNS disease (MRI brain every 6 months)
 - Repeat ECG quarterly (QTc interval monitoring)
 - Assess for clinical trial eligibility if progression occurs (e.g., next-gen ROS1 inhibitors)
-

Follow-up:

- Oncology review – every 4 weeks
 - Repeat imaging – every 3 months
 - Baseline audiology referral (due to reported mild tinnitus, non-impacting)
-

Signed,
Attending: Oncology Consultant – Thoracic Cancers
Dated: 10 April 2025