

## THE NOVEL MANAGEMENT OF SMALL-CELL VARIANT ANAPLASTIC THYROID CARCINOMA

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**Background/Purpose:** Anaplastic thyroid carcinoma - (ATC) has a dismal prognosis unchanged over decades. Few small case series report survivors of over 2 years in highly selected cases subjected to trimodality therapy.

We present a rare case of small-cell variant ATC with only lung oligometastases in a 65-year old man who had total thyroidectomy followed by a novel concurrent chemoradiotherapy schedule.

**Methods:** Our patient presented with rapidly developing neck swelling. FNA suggested ATC. Total thyroidectomy with removal of left level III and VI nodes was performed. Final histology reported a left-sided poorly differentiated "small-cell variant" ATC, 76 mm in maximum dimension with lymphovascular invasion and R2 resection and not a small-cell lung cancer thyroid deposit. All resected lymph nodes were involved.

A month later he received day 1 of four proposed cycles of 3-weekly intravenous Cisplatin 60mgm<sup>-2</sup> and Etoposide 120mgm<sup>-2</sup> then days 2,3 oral Etoposide 100mgm<sup>-2</sup>. Cycle 2 commenced along with GCSF prophylaxis and concurrent radiotherapy, 66Gy in 30 daily fractions over 6 weeks to the high risk areas with residual disease using a Tomotherapy-based Intensity Modulated Radiotherapy (IMRT) technique.

**Results:** Concurrent chemoradiotherapy was successfully completed despite grade 3 dysphagia requiring naso-gastric feeding. The fourth cycle was omitted due to severe fatigue. He received palliative radiotherapy to a symptomatic right lung deposit four months later. Currently he has been weaned off tube feeding after a normal video fluoroscopic assessment and is in complete remission apart from an untreated lung nodule ten months from his diagnosis.

**Discussion & Conclusion:** In the pursuit of long-term suppression of our patient's "small-cell variant" ATC we demonstrate a high dose IMRT-based chemoradiotherapy schedule with manageable toxicity and excellent locoregional disease control.