



P2.100: First, Do No Harm: Esophageal Toxicity in Palliative Lung Cancer Radiotherapy

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INTRODUCTION

In palliative thoracic radiotherapy (RT) for lung cancer, symptom relief is the primary objective, and treatment-related toxicity should be minimized. Dysphagia is a common complication of thoracic RT and may significantly impair quality of life. This study aimed to evaluate esophageal radiation doses during palliative RT and their association with dysphagia.

METHODS

Design: Retrospective analysis of 100 patients treated with palliative thoracic radiotherapy (RT) for lung cancer between 2020 and 2025. Indications included pain and/or tumoral spinal cord compression; no patient had dysphagia before RT. Esophageal dosimetric parameters – mean dose (Dmean), maximum dose (Dmax), D5cc, V10Gy, V20Gy, and V30Gy – were extracted from treatment plans. Clinical data were collected during treatment and follow-up, and correlations between dosimetric parameters and dysphagia were statistically analyzed.

DISCUSSION AND CONCLUSION

Actionable Take Away Message

- Esophageal **Dmean** was significantly correlated with post-treatment dysphagia ($p = 0.03$), particularly at higher doses. Respecting esophageal dose constraints, especially with concurrent chemotherapy may reduce toxicity while preserving effective palliation.

Future Direction for Research

- Prospective validation of esophageal dose constraints, and evaluation of protective strategies such as oral corticosteroids, to further limit toxicity without compromising symptom control.

REFERENCES & ACKNOWLEDGEMENTS

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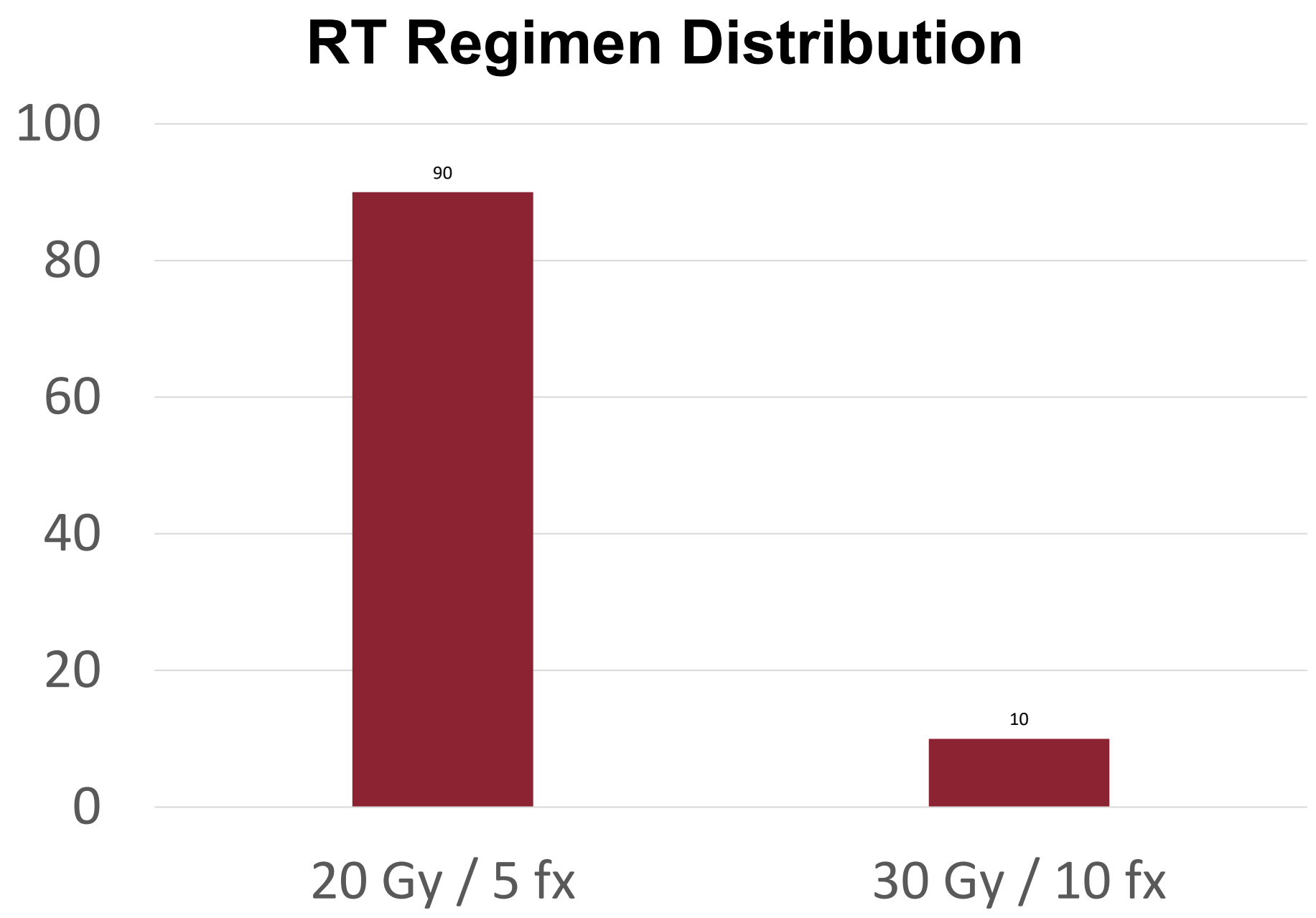
Artificial Intelligence (AI) Use Disclaimer

. No artificial intelligence (AI) tools were used in the preparation of this poster.

RESULTS

Key findings from 100 patients treated with palliative thoracic radiotherapy for lung cancer:

- Median age 65 years [38–90]; 90% received 20 Gy in 5 fractions, others 30 Gy in 10 fractions
- Sequential chemotherapy was administered in the majority of cases
- Grade 1 dysphagia occurred during RT in a minority of patients; no grade ≥ 3 toxicity after a median follow-up of 5.8 months [1–26]
- Mean esophageal Dmean was 10.3 Gy [0.8–24.3] and Dmax was 22.6 Gy [4.6–32.4]
- Esophageal Dmean was significantly correlated with post-treatment dysphagia (**$p = 0.03$**)
- Chemotherapy increased esophagitis risk (**$p = 0.04$**); oral corticosteroid use was associated with a reduced risk



Esophageal Dosimetric Parameters

Parameter	Mean	Range
Dmean (Gy)	10.3	0.8–24.3
Dmax (Gy)	22.6	4.6–32.4
Follow-up (months)	5.8	1–26