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# Post-operative radiotherapy (PORT) for incompletely resected Non-Small Cell Lung Cancer (NSCLC): Single centre audit of outcomes

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## INTRODUCTION

PORT for NSCLC remains controversial [1]. However, PORT is recommended following an incomplete surgical resection [2]. In our centre regimes of 45 - 50Gy have been used, with the higher dose used as practice evolved. This audit reviews all patients treated with PORT between 2010 - 15.

## METHODS

Case notes and radiotherapy records for all patients receiving PORT were retrospectively reviewed. Basic patient demographics, tumour characteristics, radiotherapy and survival data were collected. Descriptive statistical analysis and Cox regression analysis were performed using SPSS. Survival was calculated from date of diagnosis to date of death or last follow up.

### RESULTS - Demographics

54 patients received PORT.

Demographic		Number of patients
Gender	Male	30
	Female	24
Age	Median	67
Performance Status	0	15
	1	22
	2	2
	Unknown	15
Site of Primary	Central	5
	Right	29
	Left	20
Histology	Squamous Cell	29
	Adenocarcinoma	21
	Other histology	4
Stage (TNM v7)	1	8
	2	20
	3	25
	4	1
PET performed?	Yes	52
	No	0
Surgical procedure	Wedge excision	7
	Lobectomy	35
	Pneumonectomy	9
	Unknown	3

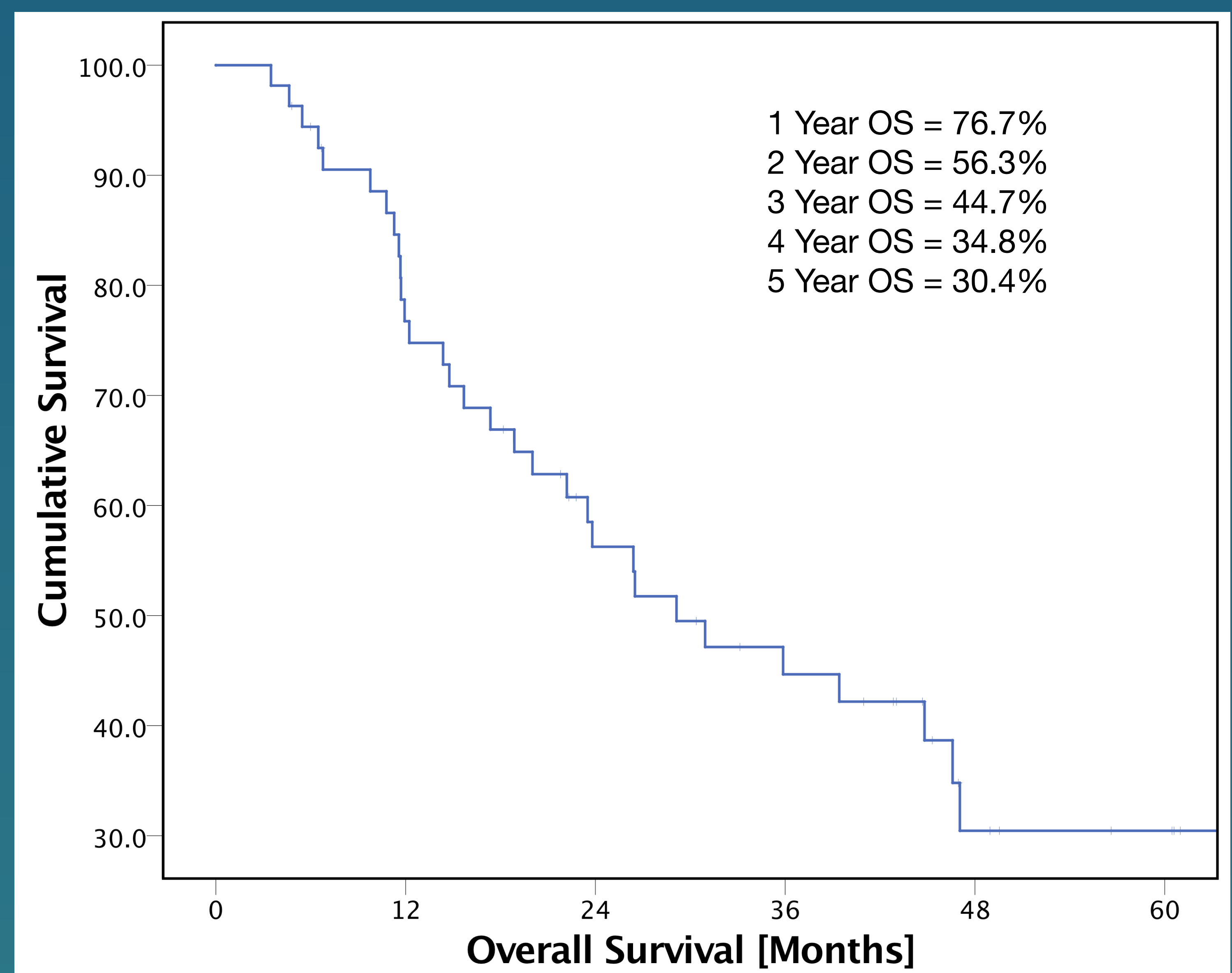
Chemotherapy was used in 29%, of whom 87% had stage III/IV disease.

37% received 45Gy/20# and 63% received 50Gy/20#.

### RESULTS Outcome

Median follow up was 45.3 months.

There was a median overall survival of 29 months (95% confidence interval 14.4-43.8 months).



No variable was statistically significant on univariate or multivariate analysis, with no difference between radiation doses, although this is limited by small numbers.

## CONCLUSIONS

- This single centre audit describes the outcomes of patients treated with PORT for incompletely resected NSCLC at a large UK teaching hospital, representing the current standard of care.
- Encouragingly these outcomes are comparable to those recently reported internationally with documented median OS of 23.8 months [3], 3-year OS rates of 34.1-49.3% [3,4], and 5-year OS rates of 32.0% [5], although comparison is limited due to size.
- This suggests that PORT use in routine practice is promising for patients with incompletely resected NSCLC.
- However, randomised trials using modern radiotherapy techniques such as LUNGART [6] are required to identify other subgroups who may benefit.

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