



# Definitive Treatment of Poor-risk Patients with Stage I Lung Cancer: A Single Institution Experience

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## Premise

Lung cancer remains the leading cause of cancer death in both men and women. A substantial number of patients with early stage non-small cell lung cancer (NSCLC) are unfit for standard surgery due to cardiopulmonary dysfunction and/or other co-morbidity. The appropriate management for this population has not been defined.

## Methods

A retrospective analysis of patients with clinical stage I NSCLC judged to be unsuitable for lobectomy was performed. All patients treated between 1996 and 2005 with primary 3D conformal radiotherapy (RT), wedge resection (WR), or radiofrequency ablation (RFA) were reviewed.

## Results

A total of 96 patients were evaluated. The study population included 66 females and 30 males with a median age of 73 years, and represents 23% of all patients treated for clinical stage I NSCLC. Patients underwent wedge resection (WR, n=45), primary radiotherapy (RT, n=39) or (RFA, n = 12). The median RT dose was 70 Gy in 2.5 Gy fractions in patients treated with primary RT. Adjuvant RT (median dose 55Gy) was administered in one-third of patients who underwent WR, and few patients received chemotherapy (WR-2, RT-2). Pathologic upstaging was documented in 18% of surgically treated patients.

With median follow-up of 21 months, 55 patients remain alive. Actuarial 3-year survival is 65% following WR and 60% after primary RT. Fourteen patients were found to have recurrences, 7 of which had multiple sites (7 local, 5 regional, 9 distant). Local tumor relapse and distant metastases were observed with approximate equal probability following either WR or RT, and isolated nodal relapse occurred in 5 patients (WR- 4, RT-1). In the entire cohort, four patients were treated with salvage therapy. One had RT after primary open wedge resection, one had RFA after primary radiation, and two had repeat RFA.

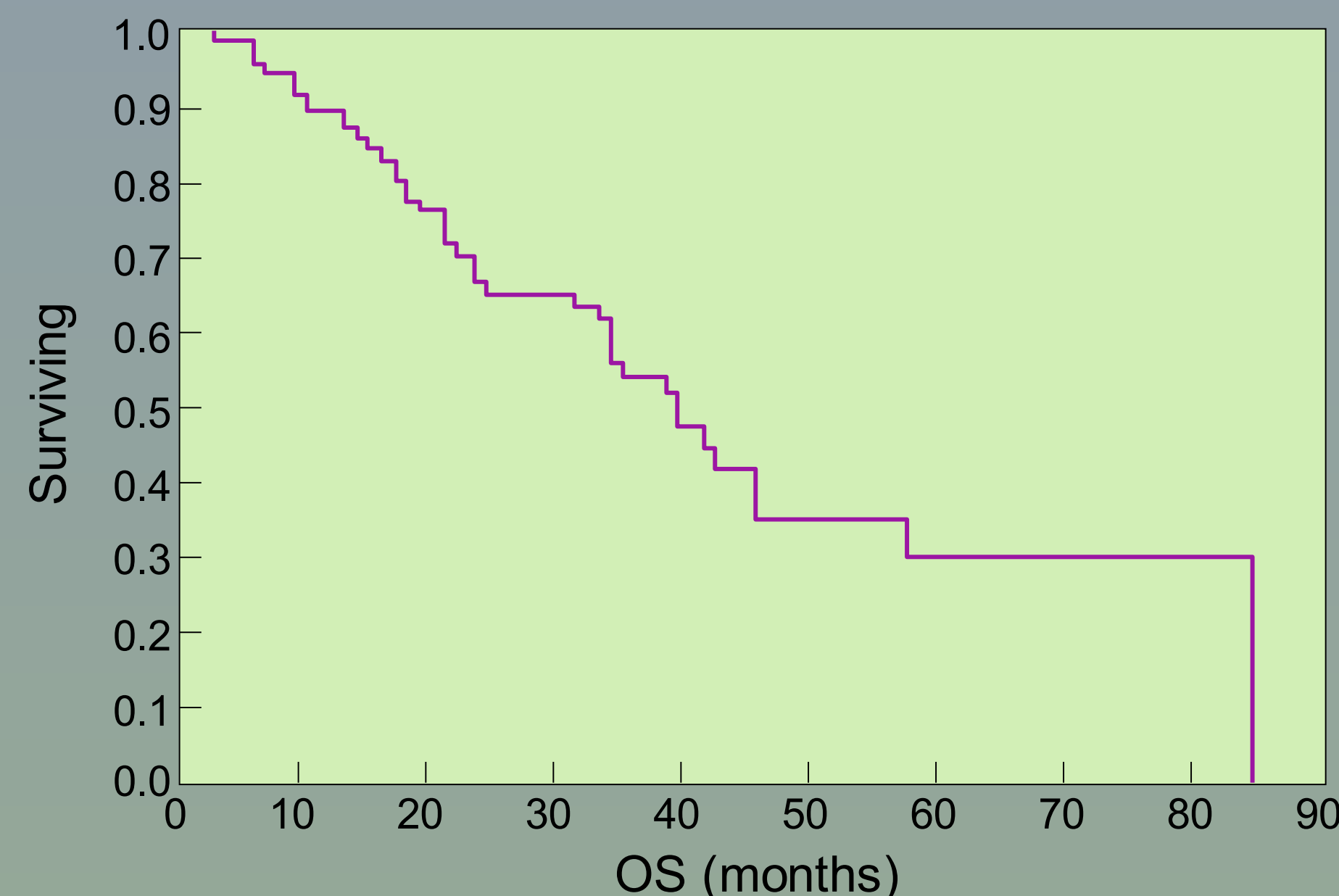
## Patient Characteristics

	WR	RT	RFA
<b>n</b>	45	39	12
M:F	13:32	13:26	4:8
Med Age	71	73	75
ECOG PS 0/1/2	18/24/2	1/33/5	5/7/0
Pts requiring O <sub>2</sub>	22%	33%	25%
Median FEV-1 (L)	1.11	0.87	NA
Median DLCO	46%	38%	NA

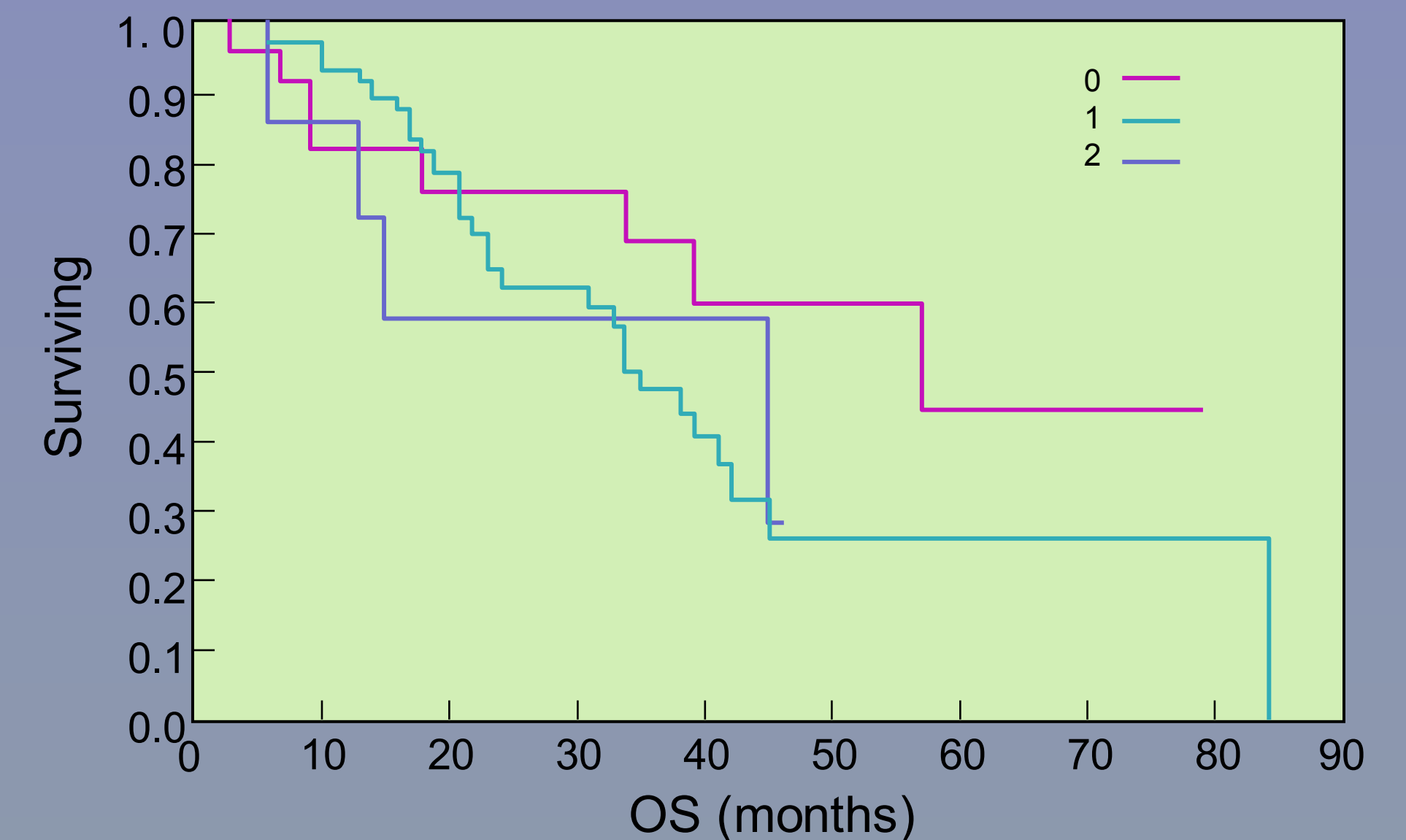
## Outcome

	RT (n=39)	WR(n=45)
3yr survival	60%	65%
Median Survival	21	25
Local Control	87%	84%

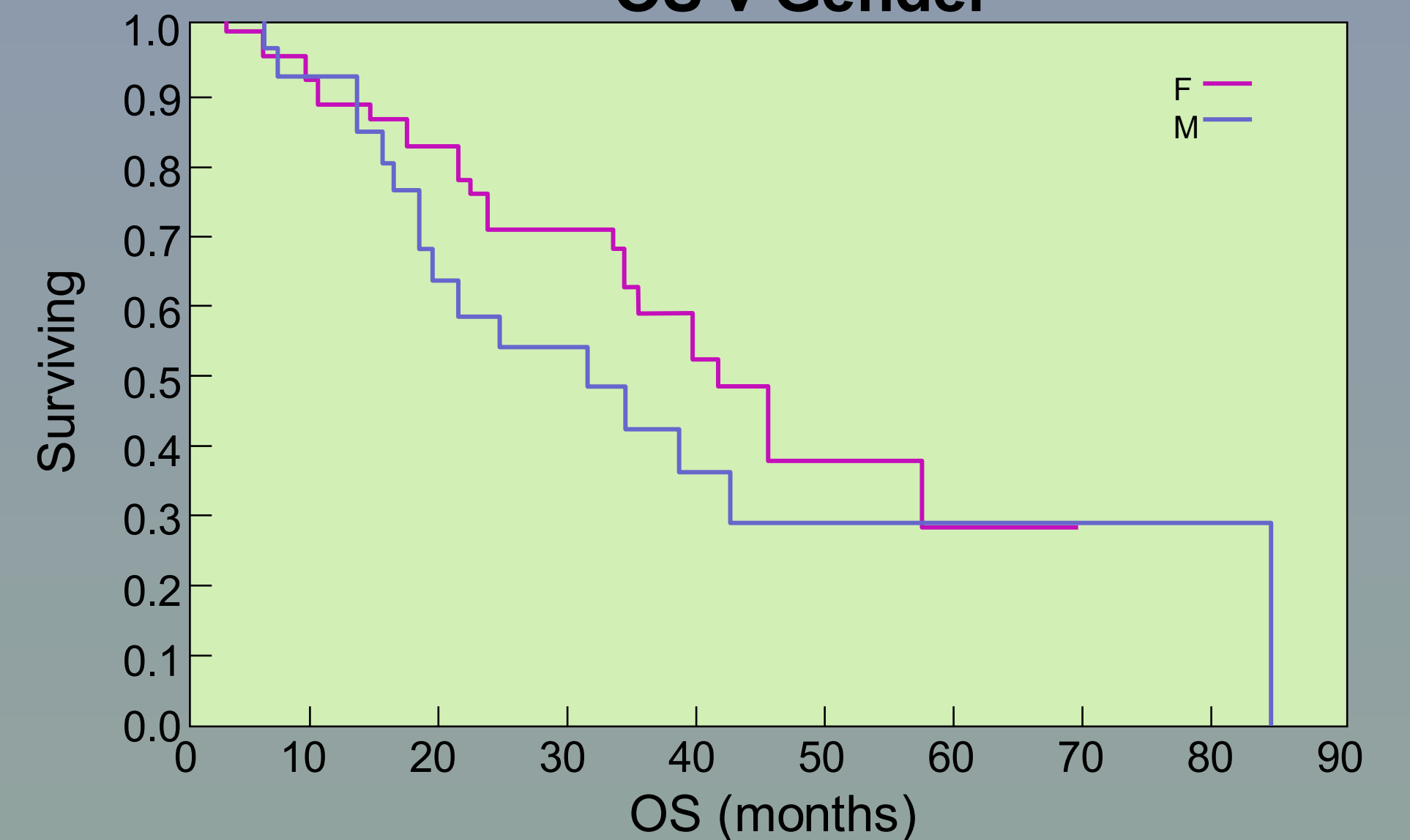
## Overall Survival (OS)



## OS v ECOG PS



## OS v Gender



## Conclusion

Patients with early stage NSCLC have an excellent expectation for intermediate-term survival despite co-existing medical co-morbidity, although the high proportion of women in this study may have influenced outcomes. Prospective trials are warranted in this population to better define optimal treatment strategies.