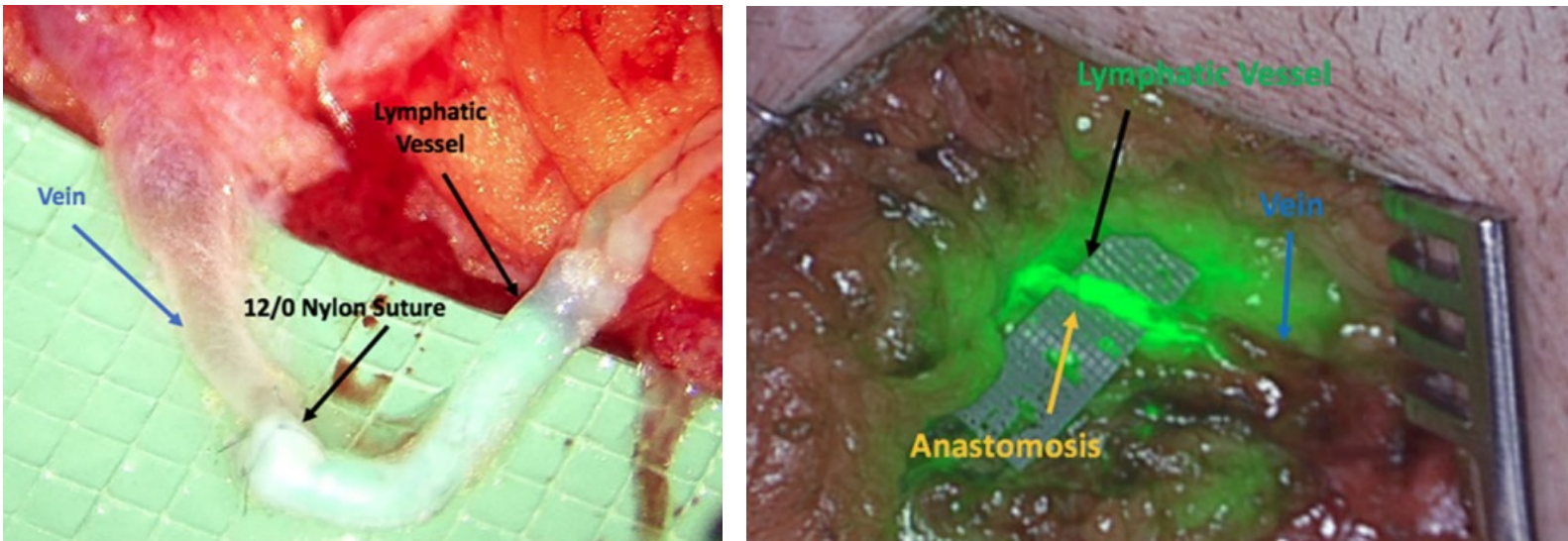




Background

- Lymphedema remains a potentially distressing problem for patients after surgical treatment for skin cancers.
- Rates of lymphedema are four times higher after axillary lymph node dissection (ALND) compared to sentinel lymph node biopsy (SLNB).
- As many as 20-45% of melanoma cancer survivors are affected by lymphedema.
- Preventative surgery with lymphaticovenous bypass (LVB) can reduce the incidence of lymphedema in skin cancer patients who require axillary/inguinal lymph node dissection.
- Some have raised concern about the oncologic safety of lymphedema prevention surgeries.
- Previous studies have confirmed the oncologic safety of reverse mapping (RM), but the safety of immediate lymphatic reconstruction with LVB is unknown.



Aim

- To evaluate short-term oncologic outcomes after immediate lymphatic reconstruction in melanoma patients.

Methods

- Melanoma patients who underwent axillary or inguinal LND with LVB between September 2012-December 2020 were identified using a prospective institutional database
- Variables recorded:
 - Patient demographics
 - Tumor characteristics
 - Treatment specifics
 - Operative details
- Follow-up data was recorded including development of local recurrence as well as distant metastasis
- A descriptive analysis of oncologic outcomes was performed

Results

Study Population:

- Total of 46 patients underwent LND + LVB between 2017-2020
- 46 LVBs were performed
 - 46 patients had a unilateral LVB,

Oncological Information

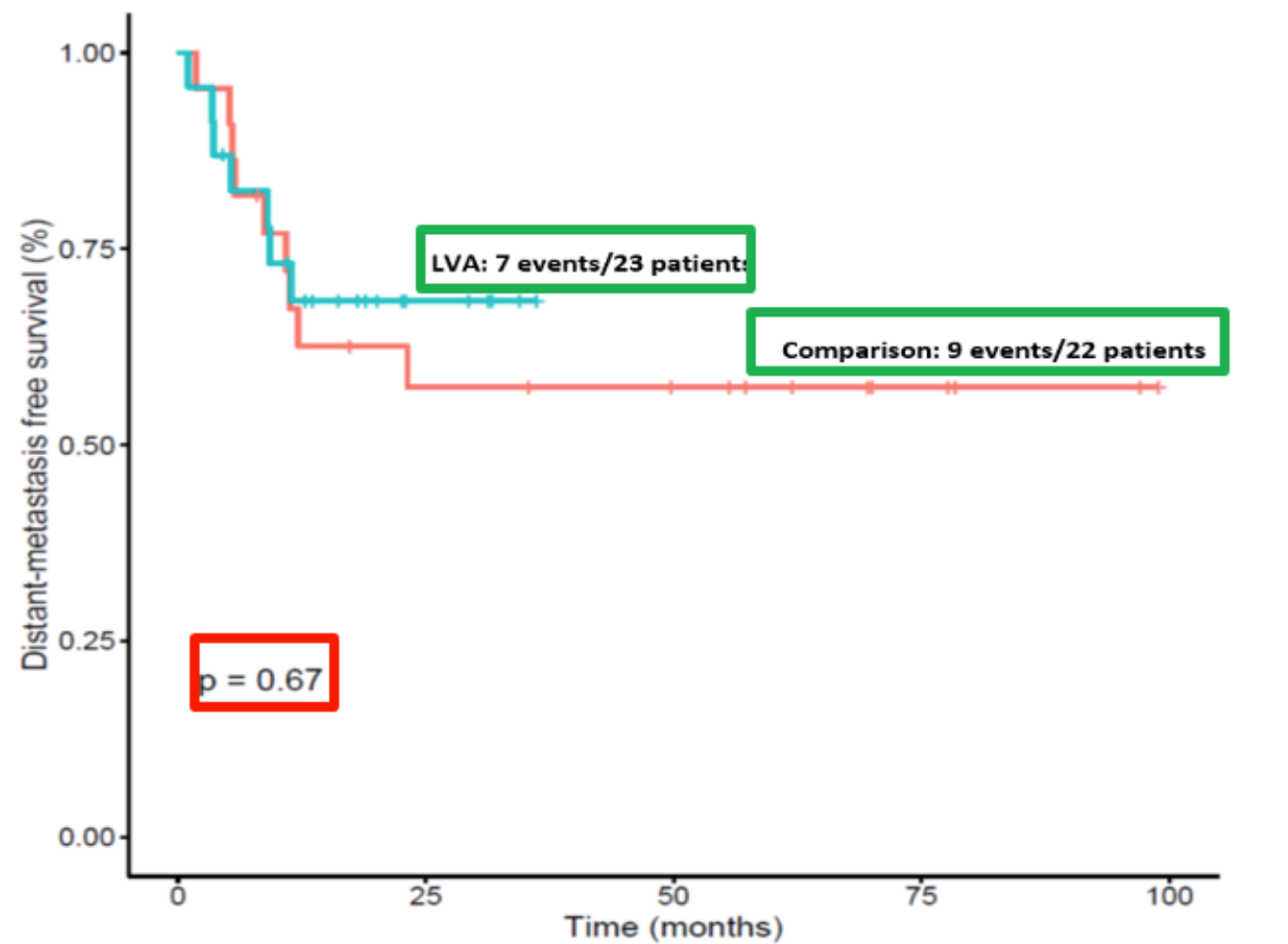
	LVA group	Comparison group	p-value
Average Largest Metastatic Lymph Node Size	45.91 ± 35.03 mm	44.54 ± 23.32 mm	0.88

Results

Study Population & Oncologic Data:

	LVA group (n=23)	Comparison group (n=22)
Size of largest metastatic lymph node (mean ± SD)	45.91 ± 35.03 mm	44.54 ± 23.32 mm
Melanoma cancer stage		
IIIB (n, %)	6, 33.33%	8, 40.00%
IIIC (n, %)	9, 50.00%	10, 50.00%
IIID (n, %)	3, 16.67%	2, 10.00%
Time to first recurrence diagnosis (median, range)	7.60, 1.07–11.4 months	6.03, 1.57–23.17 months
Recurrence types		
Distant metastasis (n, %)	7, 77.78%	9, 69.23%
Locoregional (n, %)	2, 22.22%	4, 30.77%
Immunotherapy usage (n, %)	21, 91.30%	10, 45.45%
Targeted therapy usage (n, %)	6, 26.09%	3, 13.64%
Failed therapy (n, %)	8, 38.09%	7, 70.00%

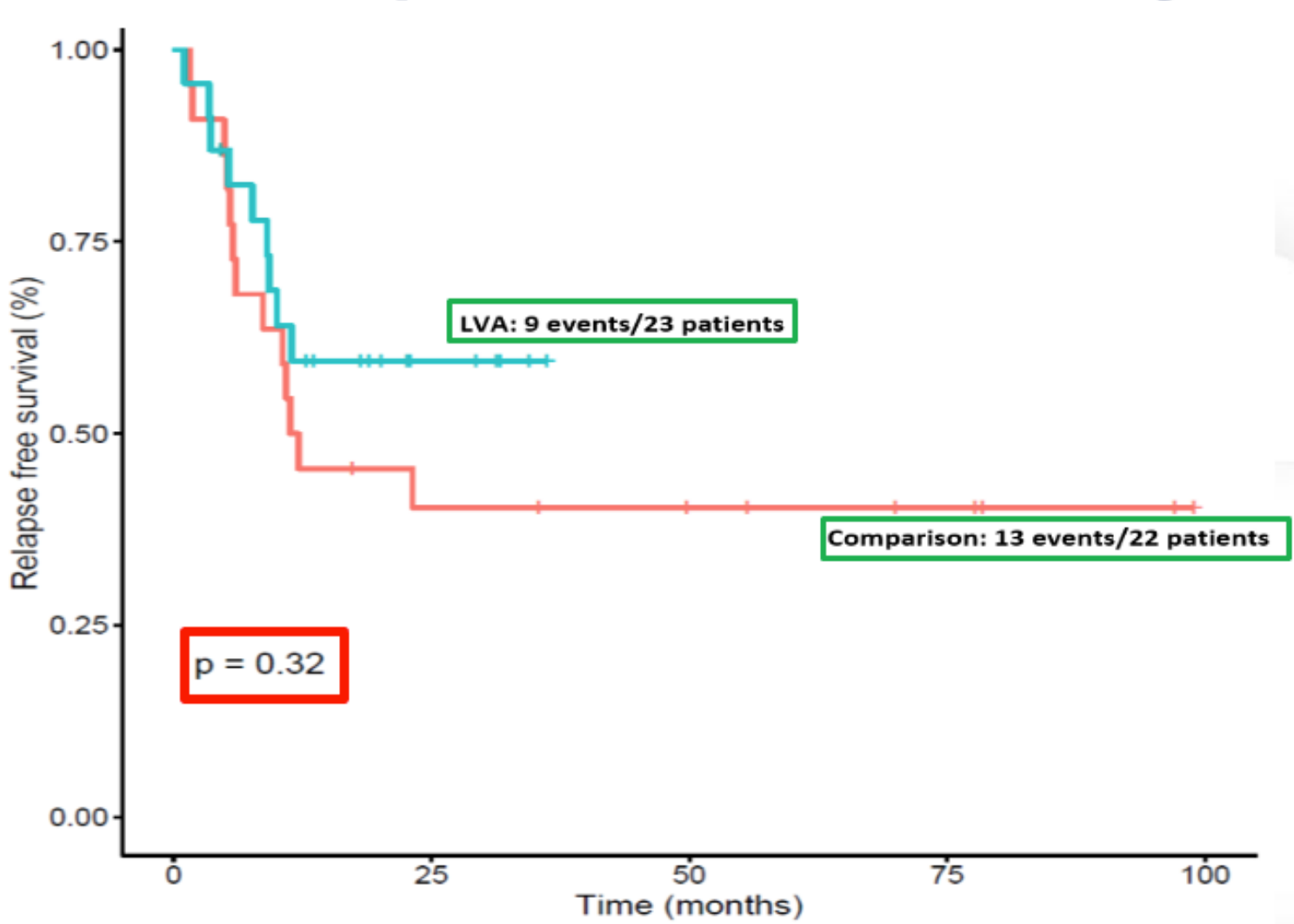
Distant-Metastasis Free Survival Analysis



No. at risk	12.5 months	25 months	37.5 months	50 months	62.5 months	75 months	87.5 months	100 months
LVA	14	6	0	0	0	0	0	0
Comparison	14	11	10	9	6	4	2	0

Results

Relapse-Free Survival Analysis



No. at risk	12.5 months	25 months	37.5 months	50 months	62.5 months	75 months	87.5 months	100 months
LVA	13	6	0	0	0	0	0	0
Comparison	11	8	7	6	5	4	2	0

Patient Demographics

	LVA group	Comparison Group	p-value
Age	61.04 ± 12.63 years	63.32 ± 14.72 years	0.58
Male	16 (69.56%)	12 (54.54%)	0.30
Female	7 (30.43%)	10 (45.45%)	
Follow-up time	18.10 months	53.45 months	<0.001
Number of lymph nodes removed	18.20 ± 9.61	17.04 ± 9.97	0.69

Conclusion

- Immediate lymphatic reconstruction in melanoma cancer patients undergoing LND is not associated with short term axillary recurrence and appears oncologically safe.