

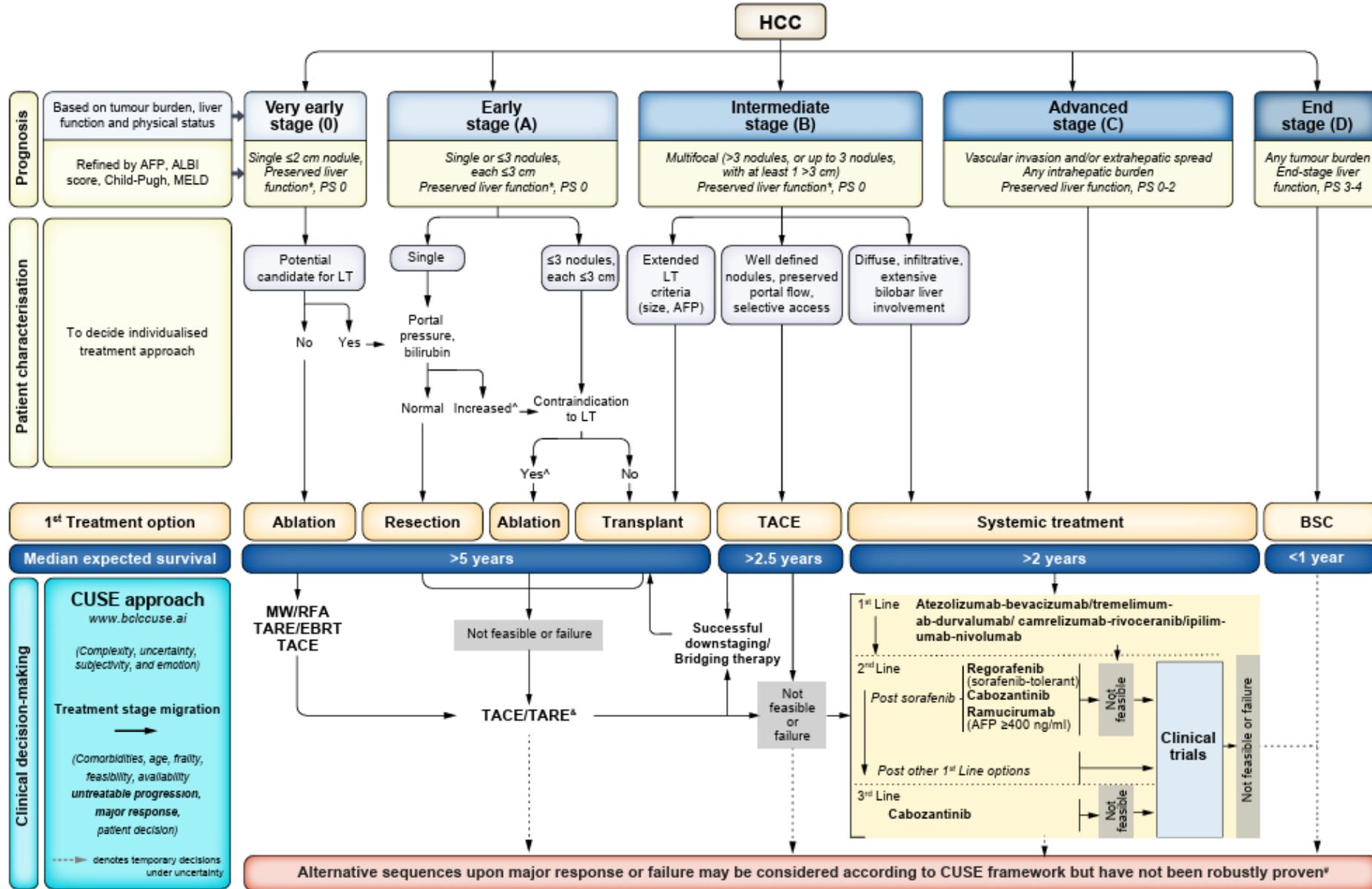
Hepatocellular Carcinoma

Treatments throughout all stages

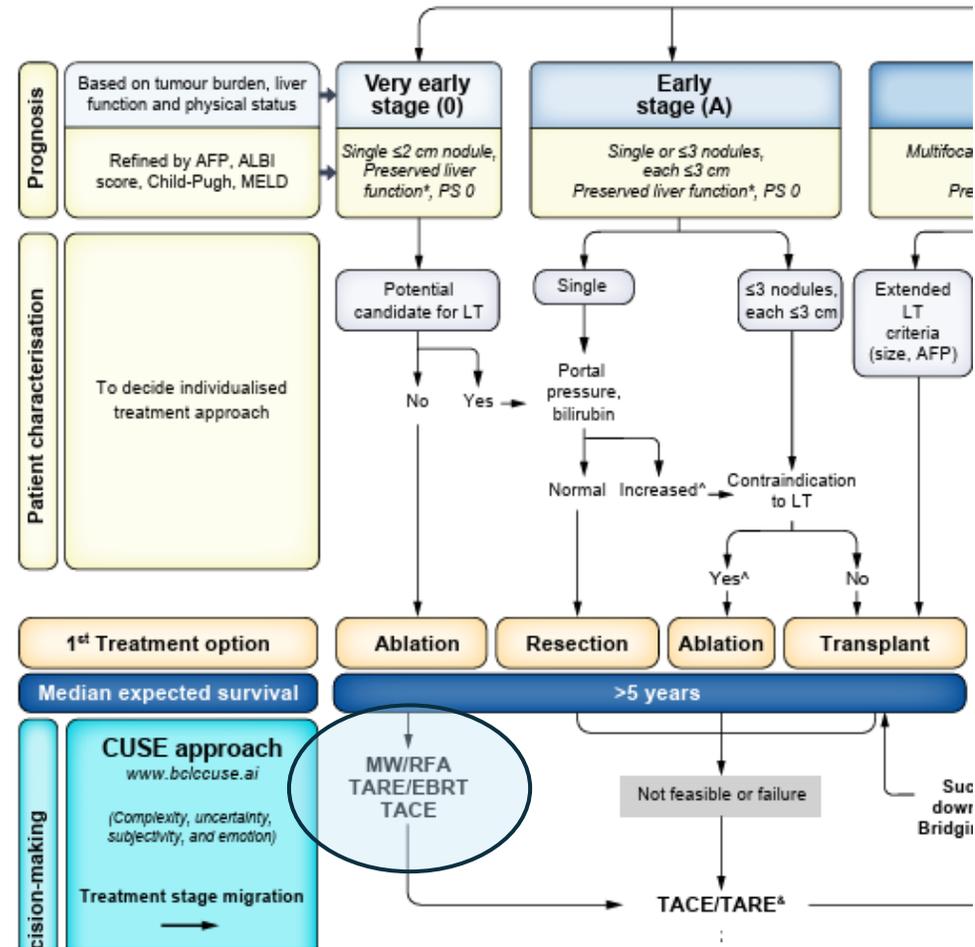
Disclosures

- I have the optics of being heavily conflicted for this talk – though I have tried to remove all bias from this presentation.
- I have received funding from:
 - Boston Scientific
 - Sirtex
 - Guerbet
 - Varian
 - Trisalus
 - AstraZenica

2025 BCLC Guidelines



2025 BCLC Guidelines



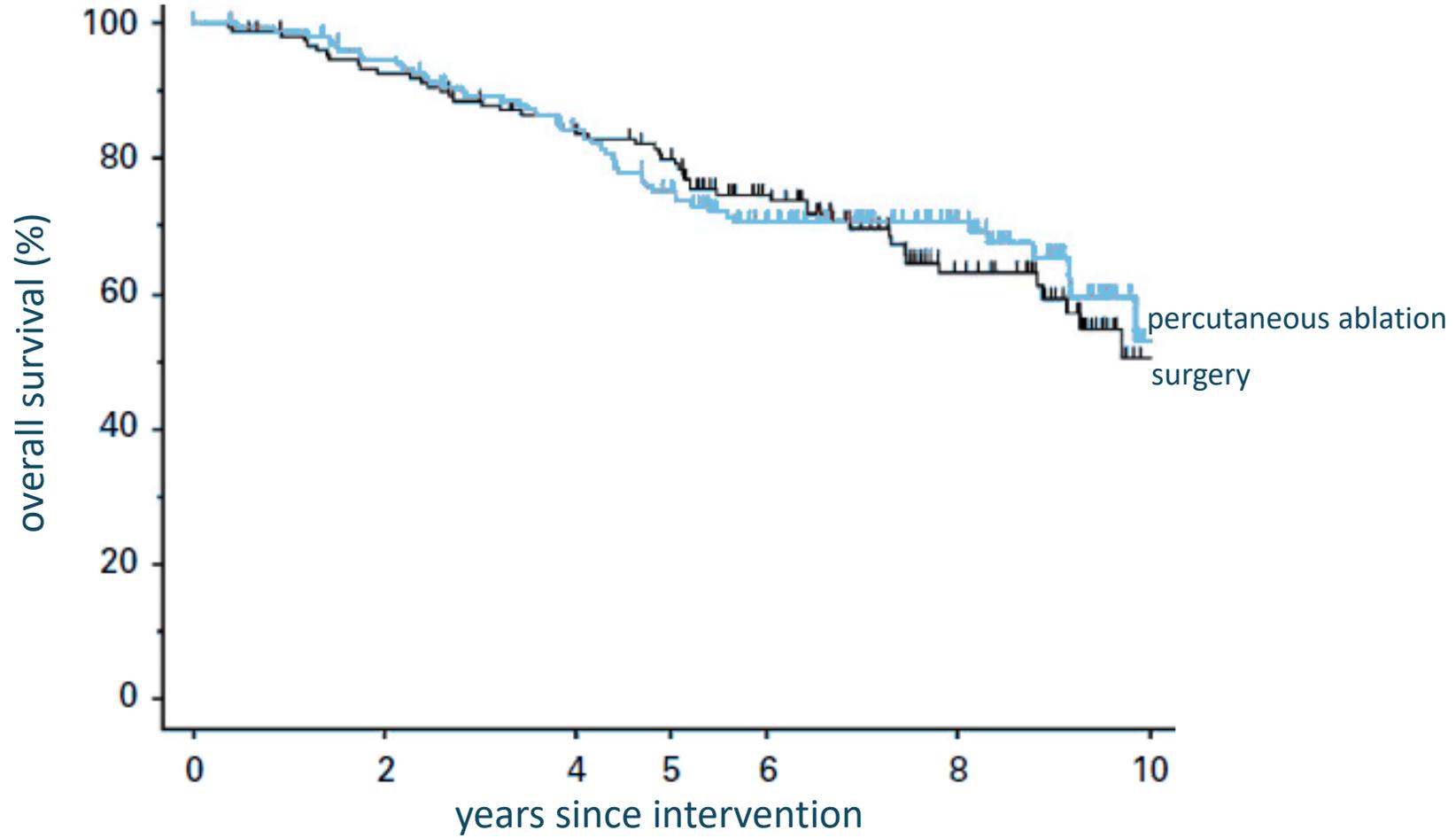
“Curative Intent Therapy”

Table 3 | Randomized controlled trials comparing RFA and surgical resection for the treatment of early stage HCC

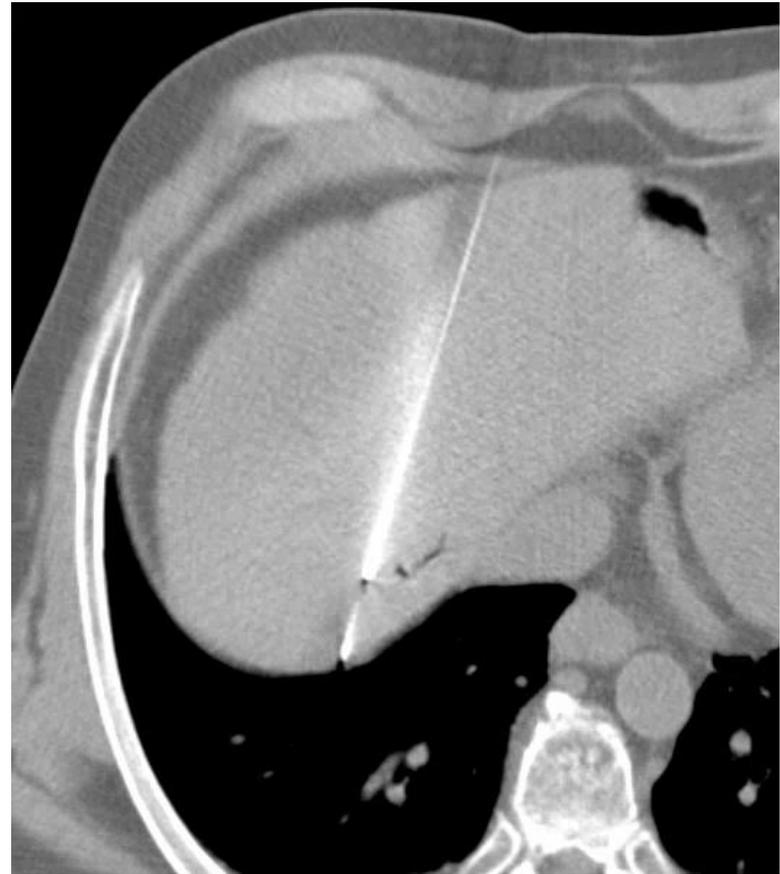
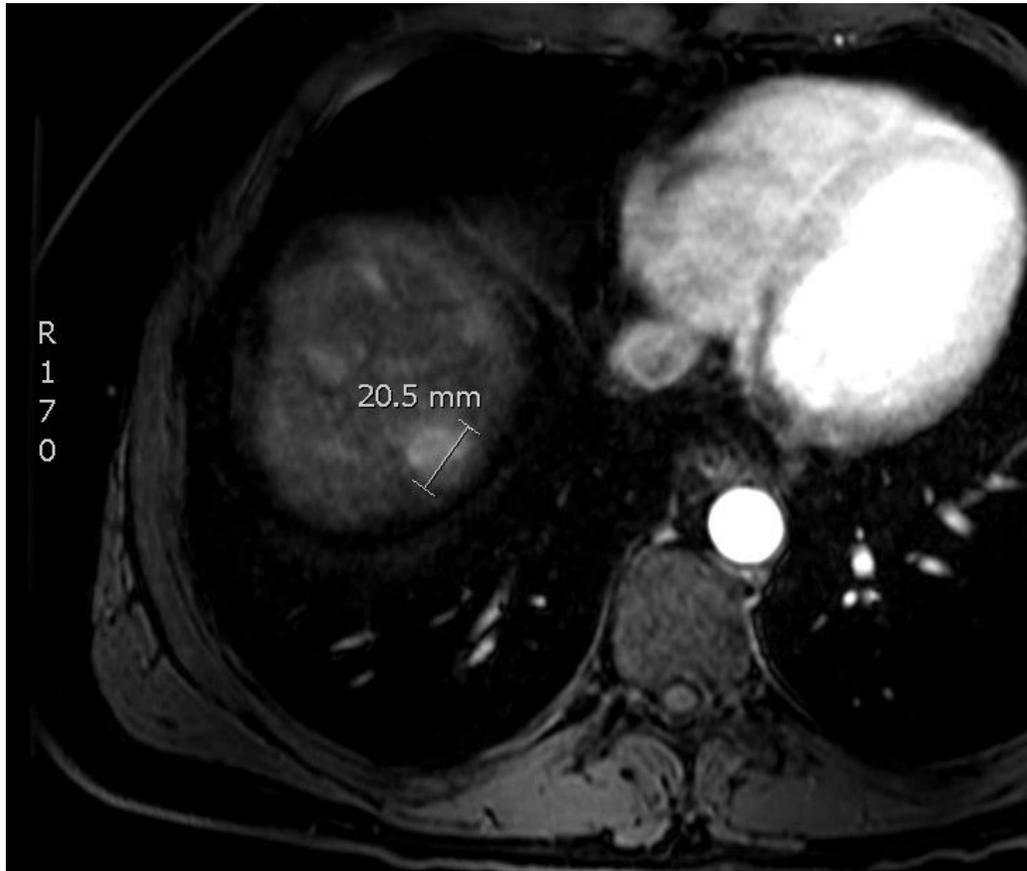
Study	Number of patients		1-year OS (%)		3-year OS (%)		5-year OS (%)		P value*
	RFA	Resection	RFA	Resection	RFA	Resection	RFA	Resection	
Chen <i>et al.</i> (2006) ⁶⁴	90	90	96	93	71	73	NR	NR	NS
Huang <i>et al.</i> (2010) ⁶⁵	115	115	87	98	70	92	55	76	0.001
Feng <i>et al.</i> (2012) ⁶⁶	84	84	93	96	67	75	NR	NR	NS

*The OS curves were compared using the log-rank test and the prognostic significance of the variables in predicting OS was assessed by univariant and multivariant Cox proportional hazards regression models. Abbreviations: HCC, hepatocellular carcinoma; NR, not reported; NS, not significant; OS, overall survival; RFA, radiofrequency ablation.

Curative intent therapy means similar outcomes to resecting the tumor

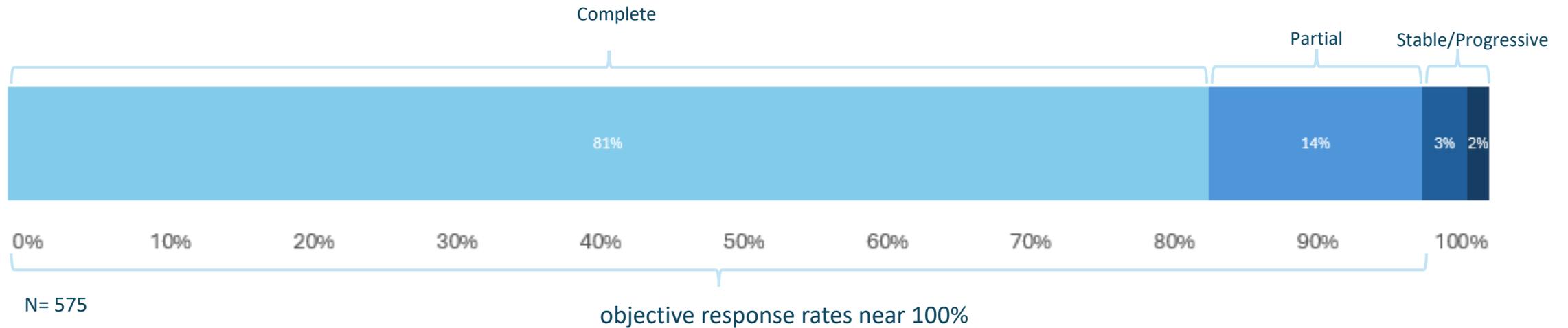


61-year-old male with LI-RADS M segment 7 lesion

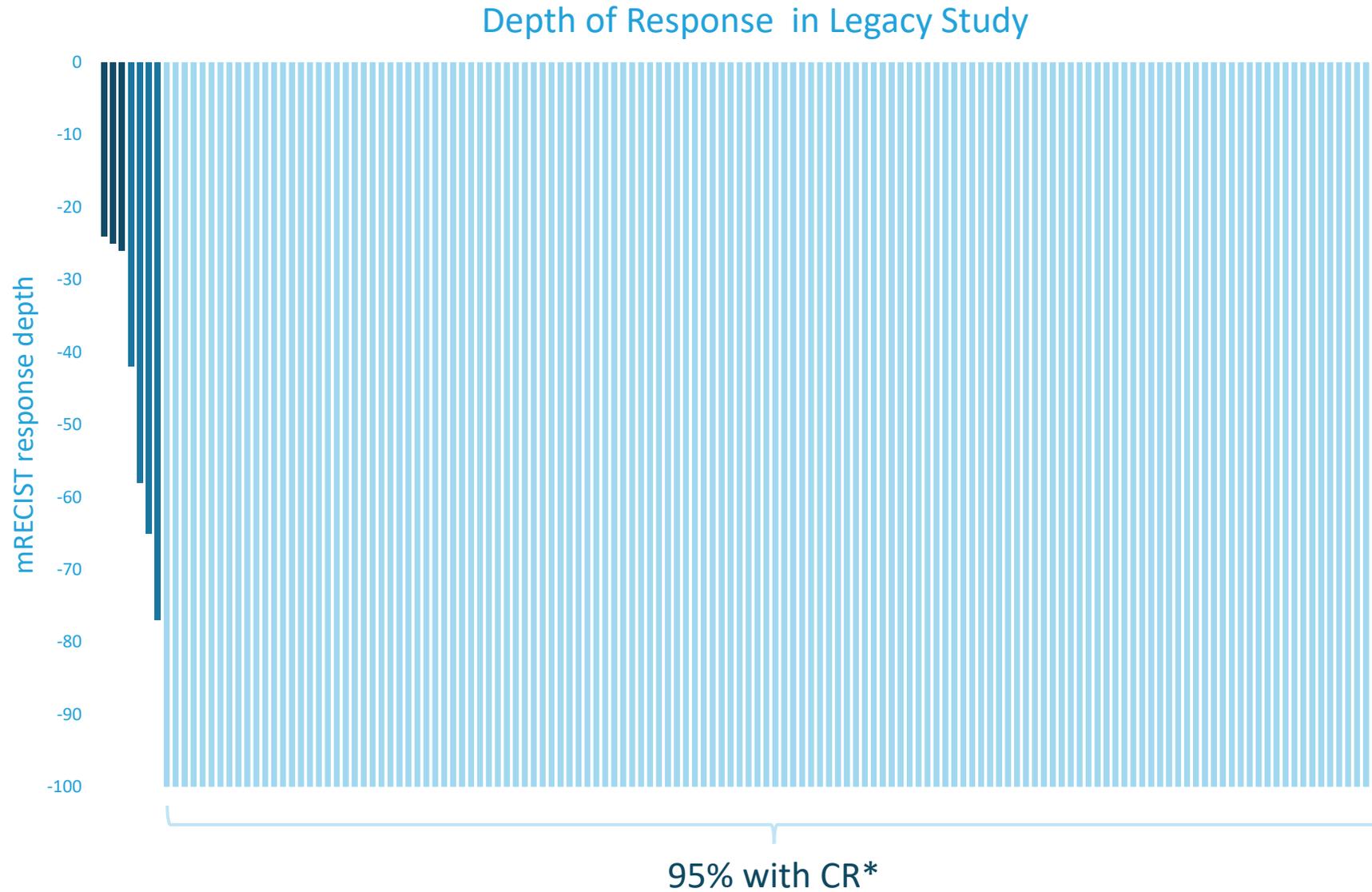


Among multiple studies, ablative RE leads to mostly complete response with nearly all patients having a response

mRECIST Response to Rad Seg Across Multiple Studies



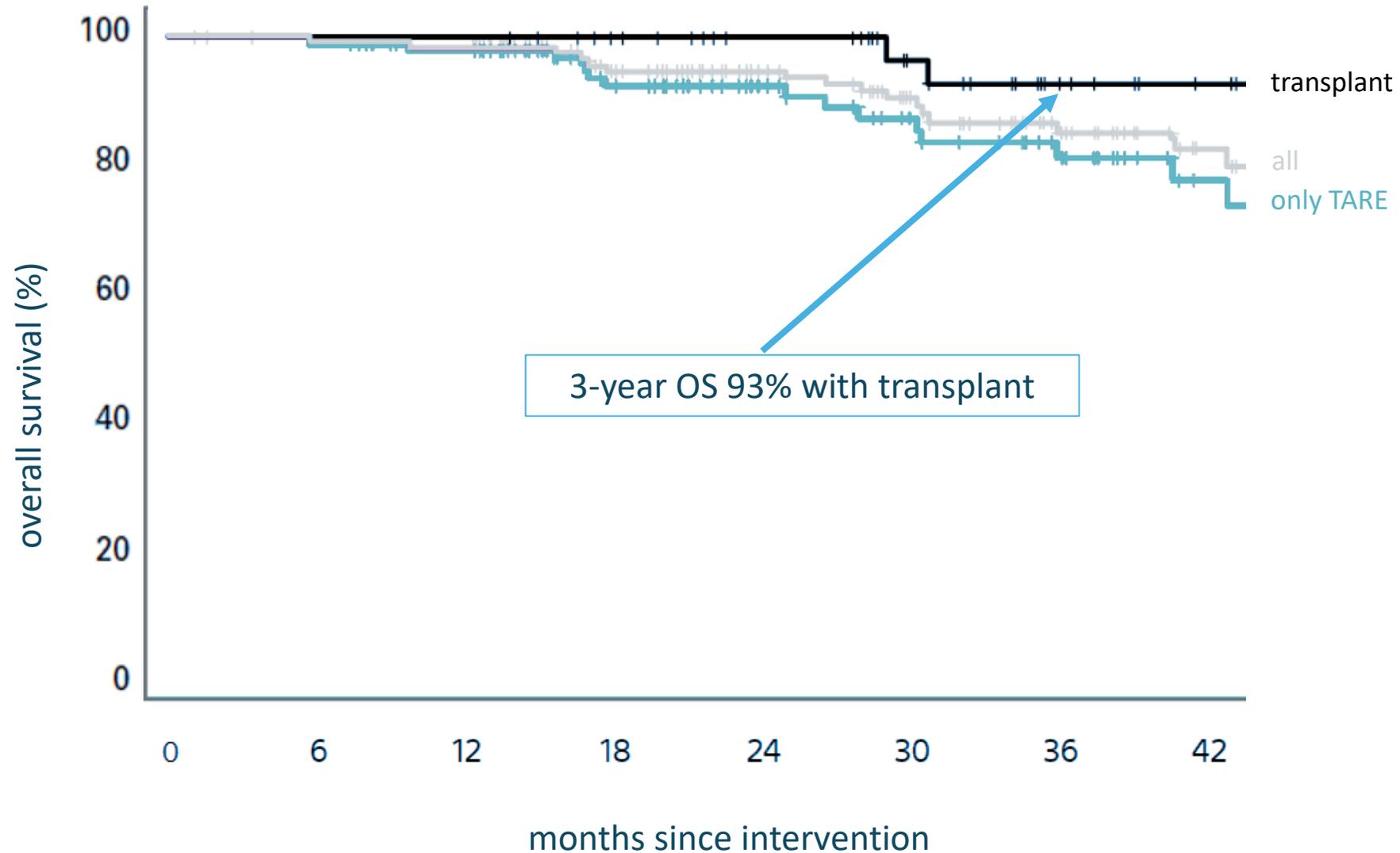
Most patients have complete responses, with others having deep responses



*evaluable pts
Ref: Salem et al. *Hepatology* 2021

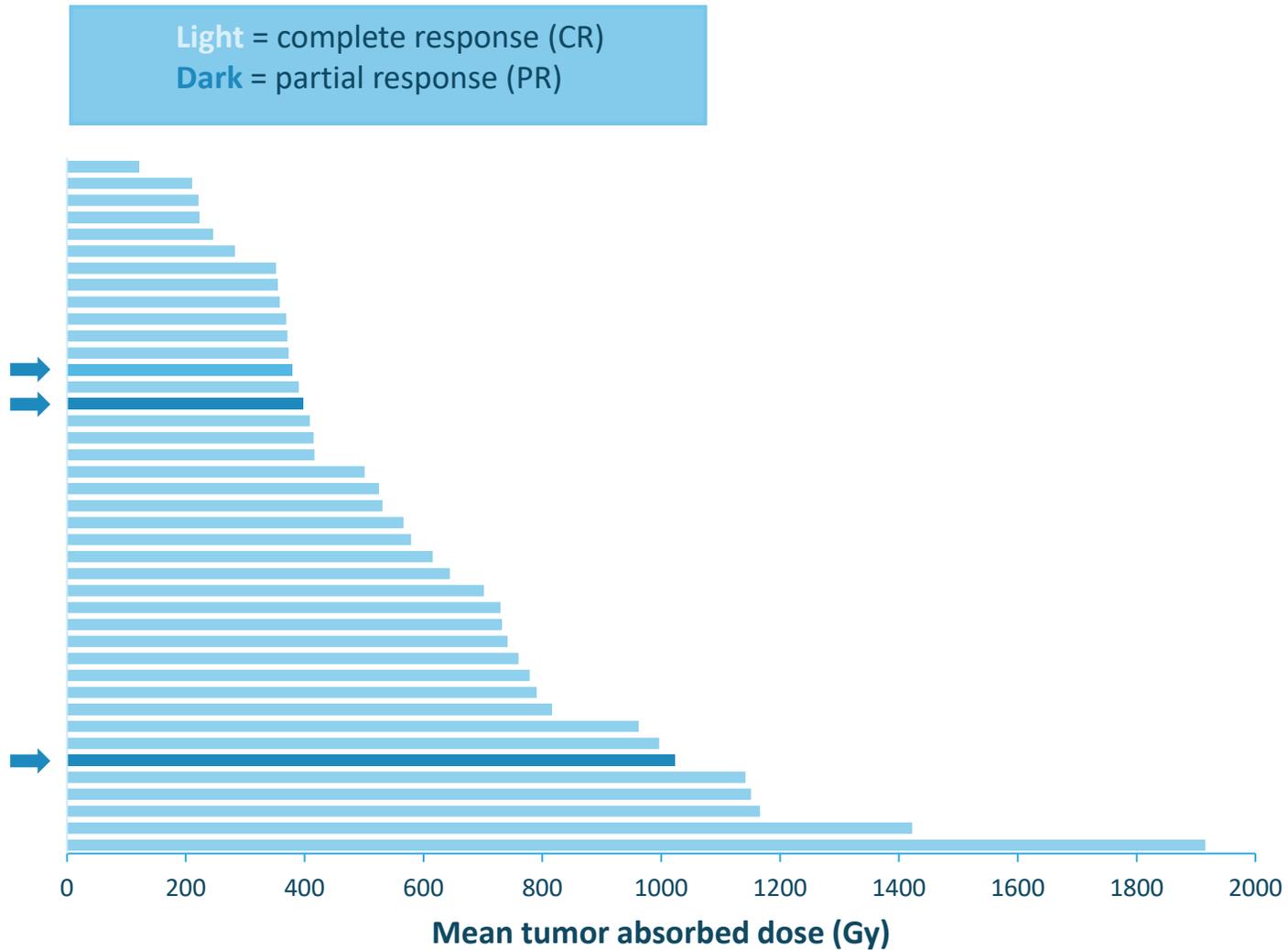
TARE monotherapy has very favorable overall survival

though survival is improved with transplantation which remains the SoC if clinically feasible



Confirmed in a national multicenter RCT

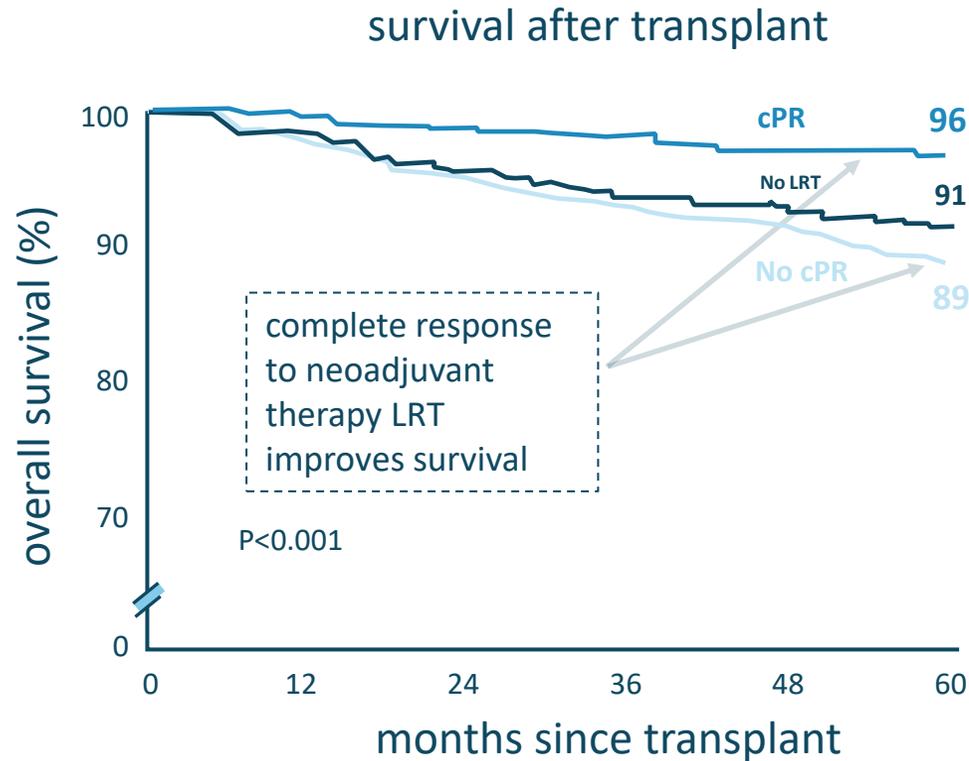
(experts and non-experts)



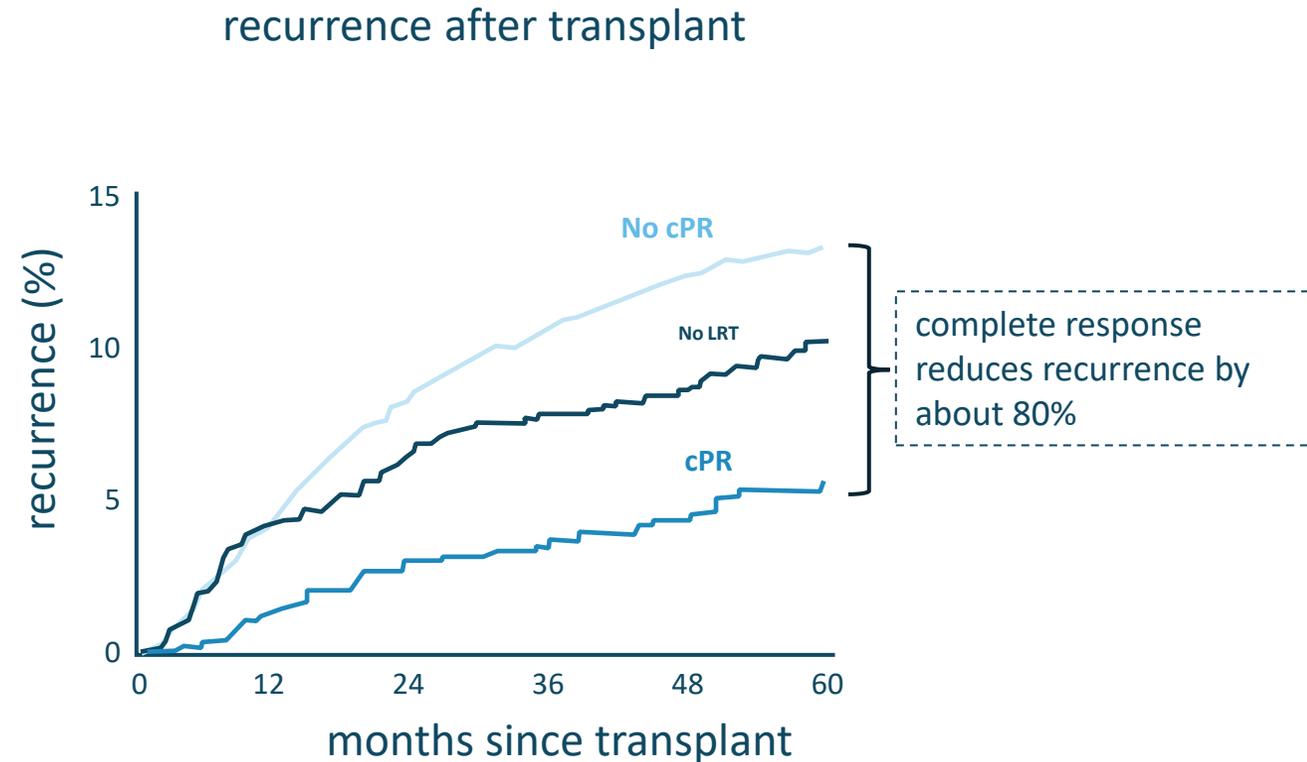
Mahvash, Armeen et al. "A prospective, multicenter, open-label, single-arm clinical trial design to evaluate the safety and efficacy of ⁹⁰Y resin microspheres for the treatment of unresectable HCC: the DOORwaY90 (Duration Of Objective Response with arterial Yttrium-90) study."

Complete pathologic response predicts improved recurrence free and survival rates after transplantation

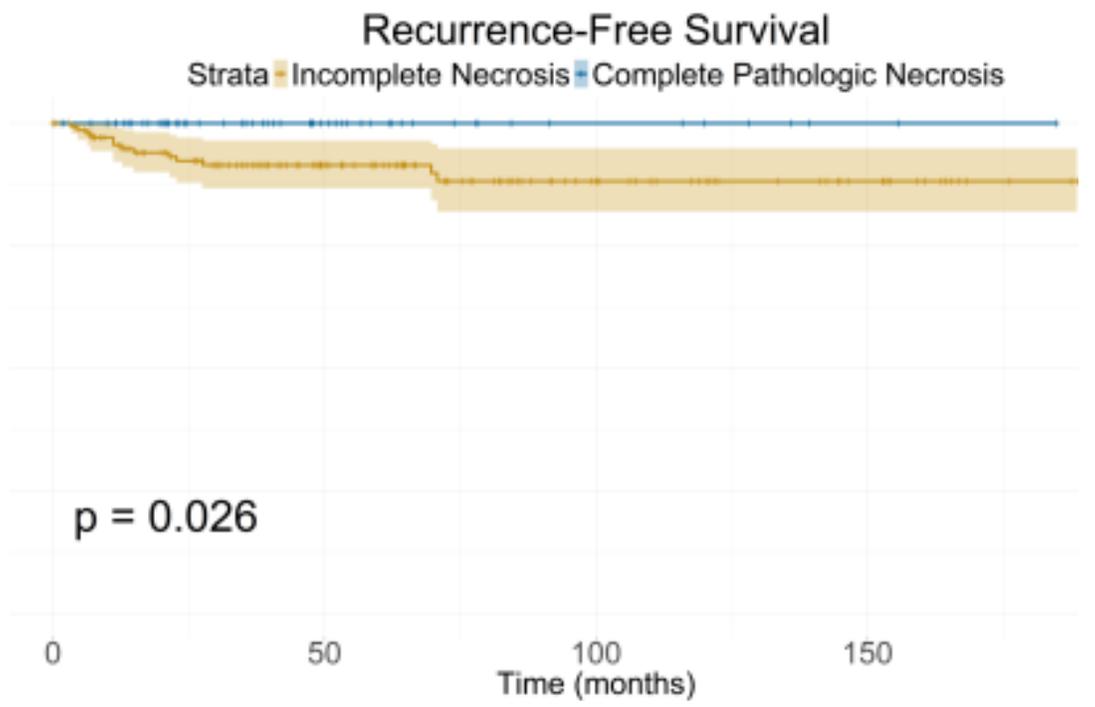
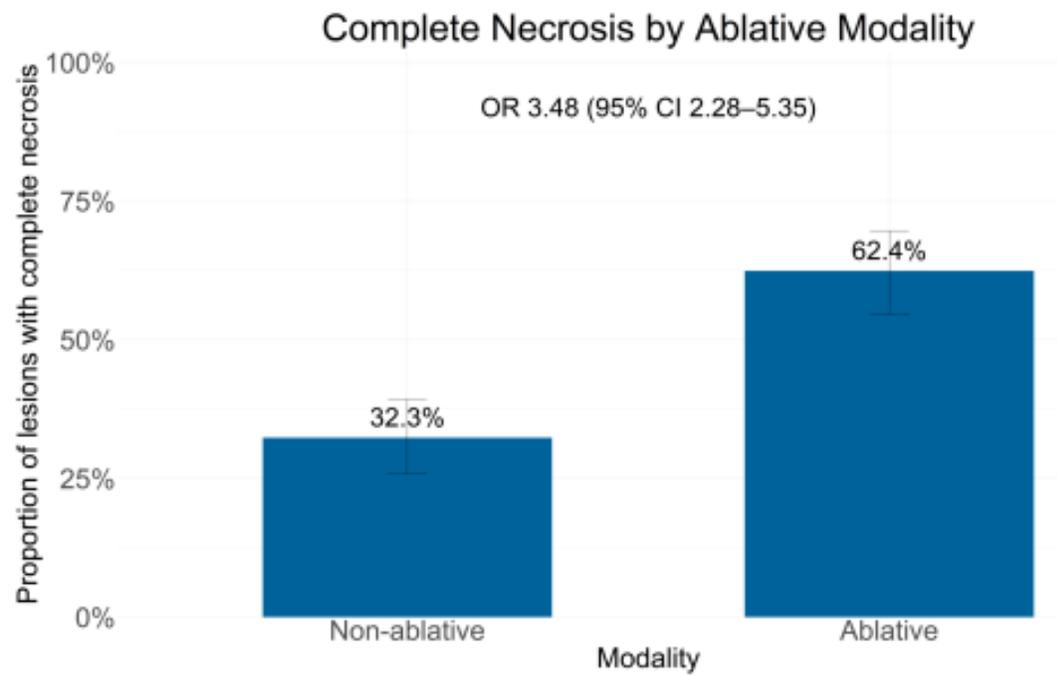
and partial response is worse than no therapy



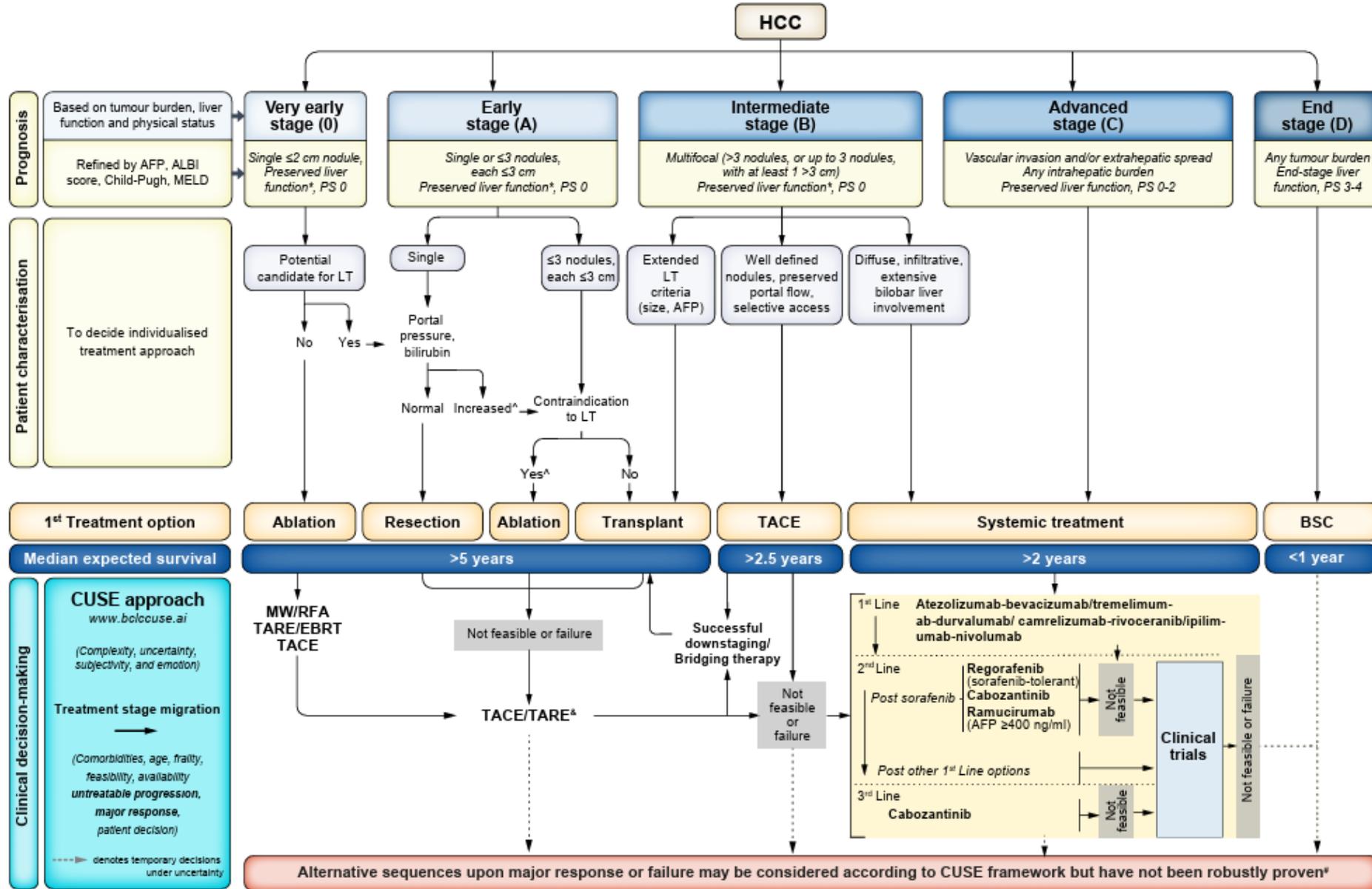
N= 3,601



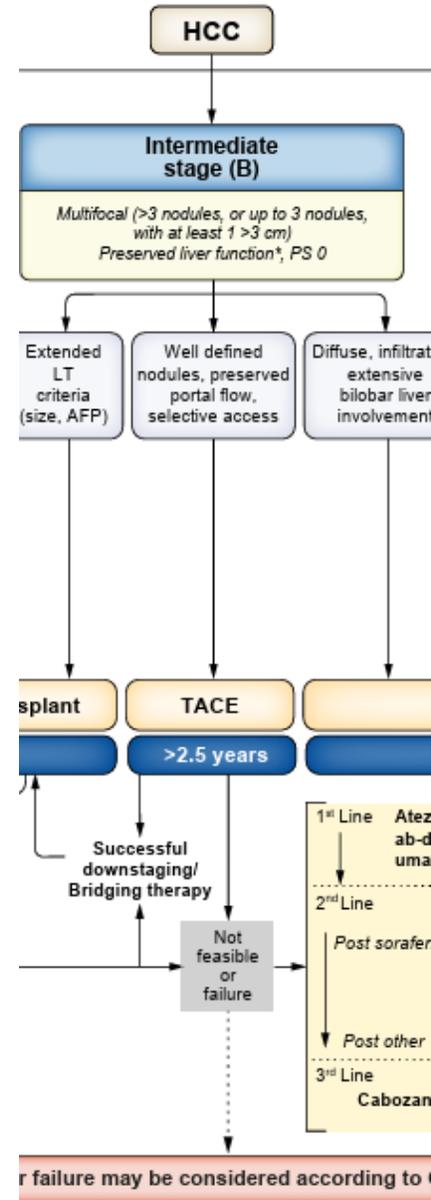
A 14-year UCSD experience confirms this



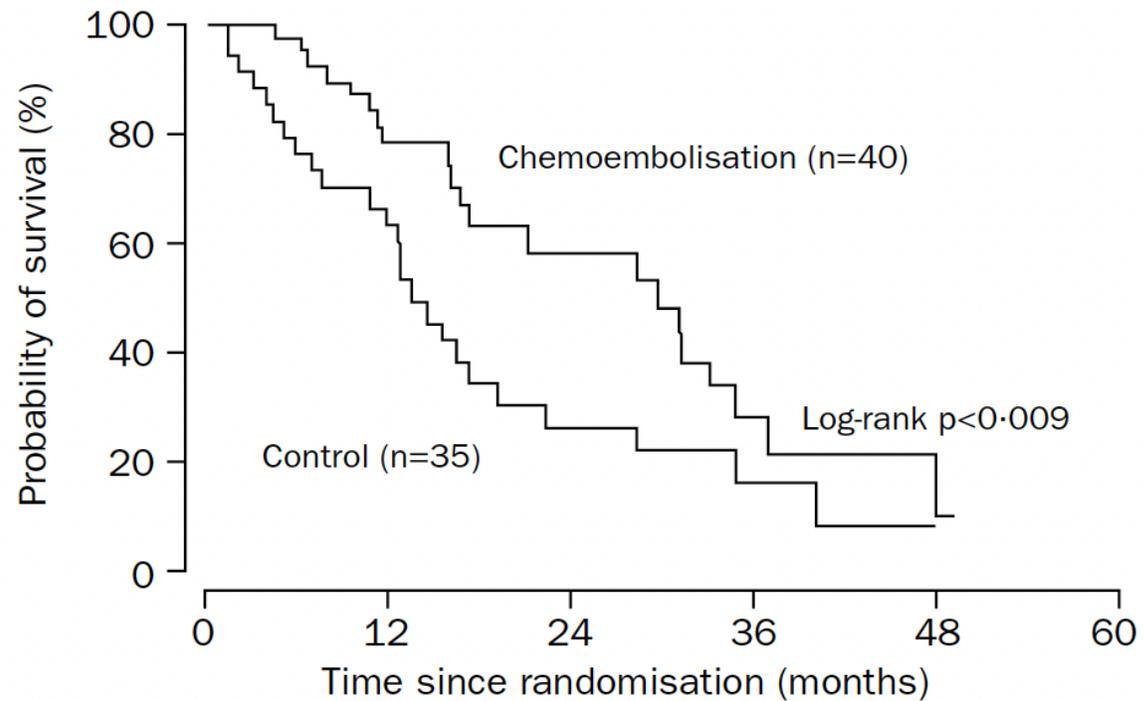
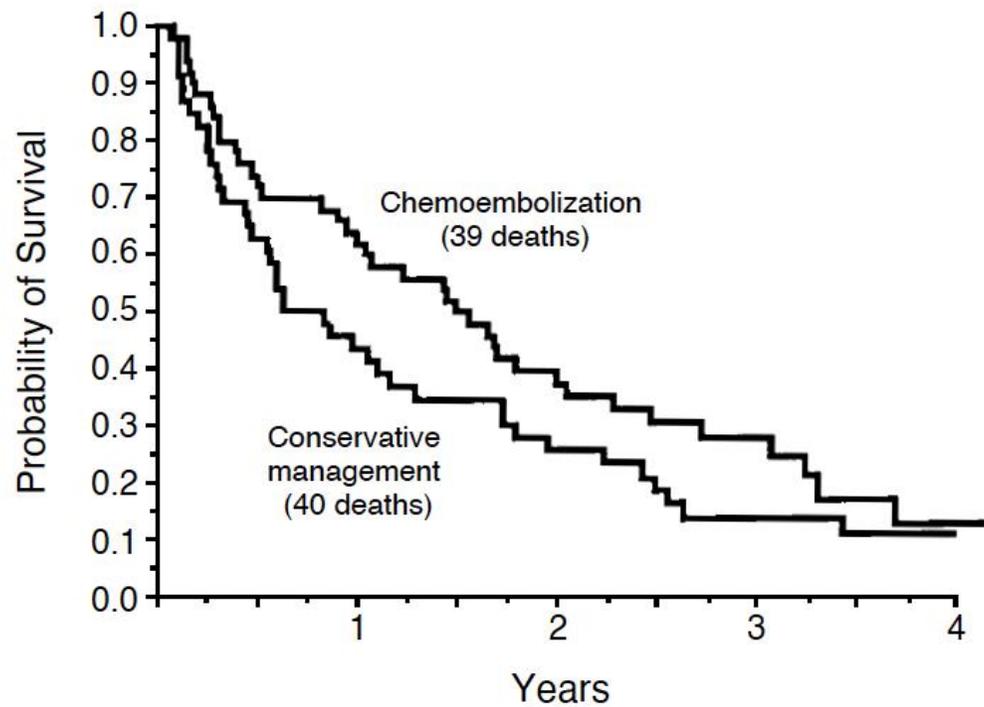
2025 BCLC Guidelines



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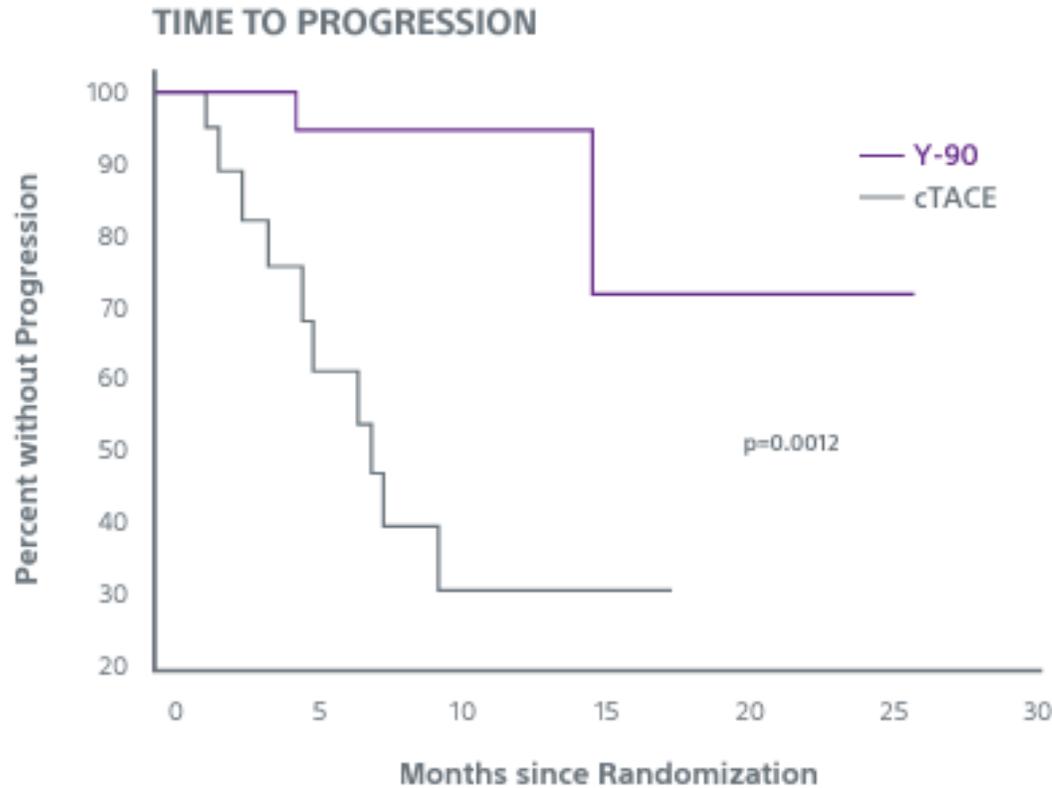


Initial Randomized Trials for TACE ~2000



Radioembolization outperforms Chemoembolization for intermediate HCC

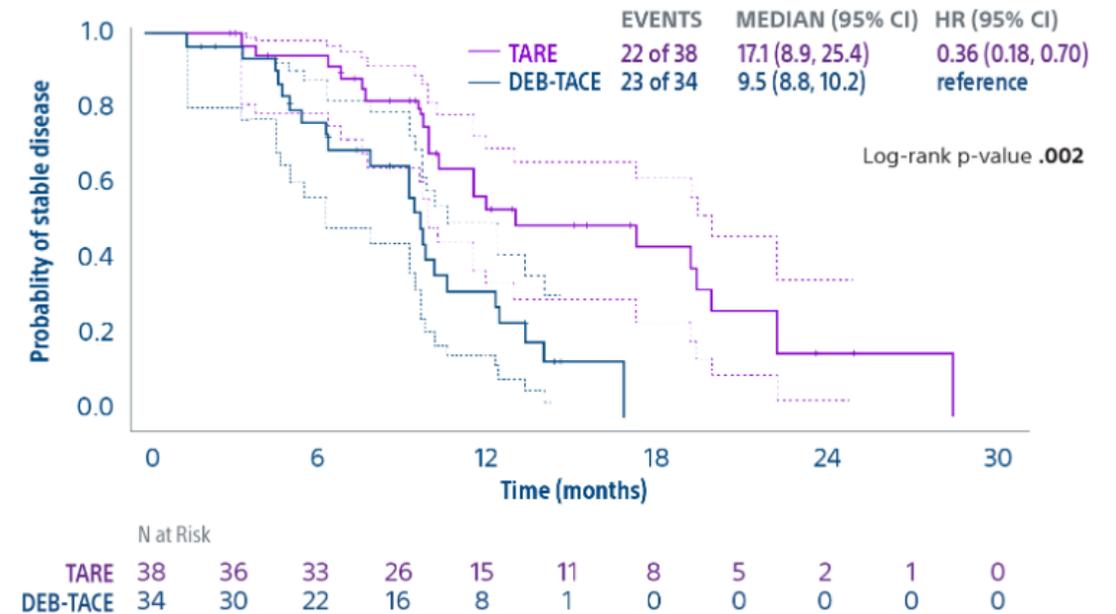
Premiere (earlier tumors)



>26 mo vs. 6.8 mo; p=0.0012

TRACE (more advanced tumors)

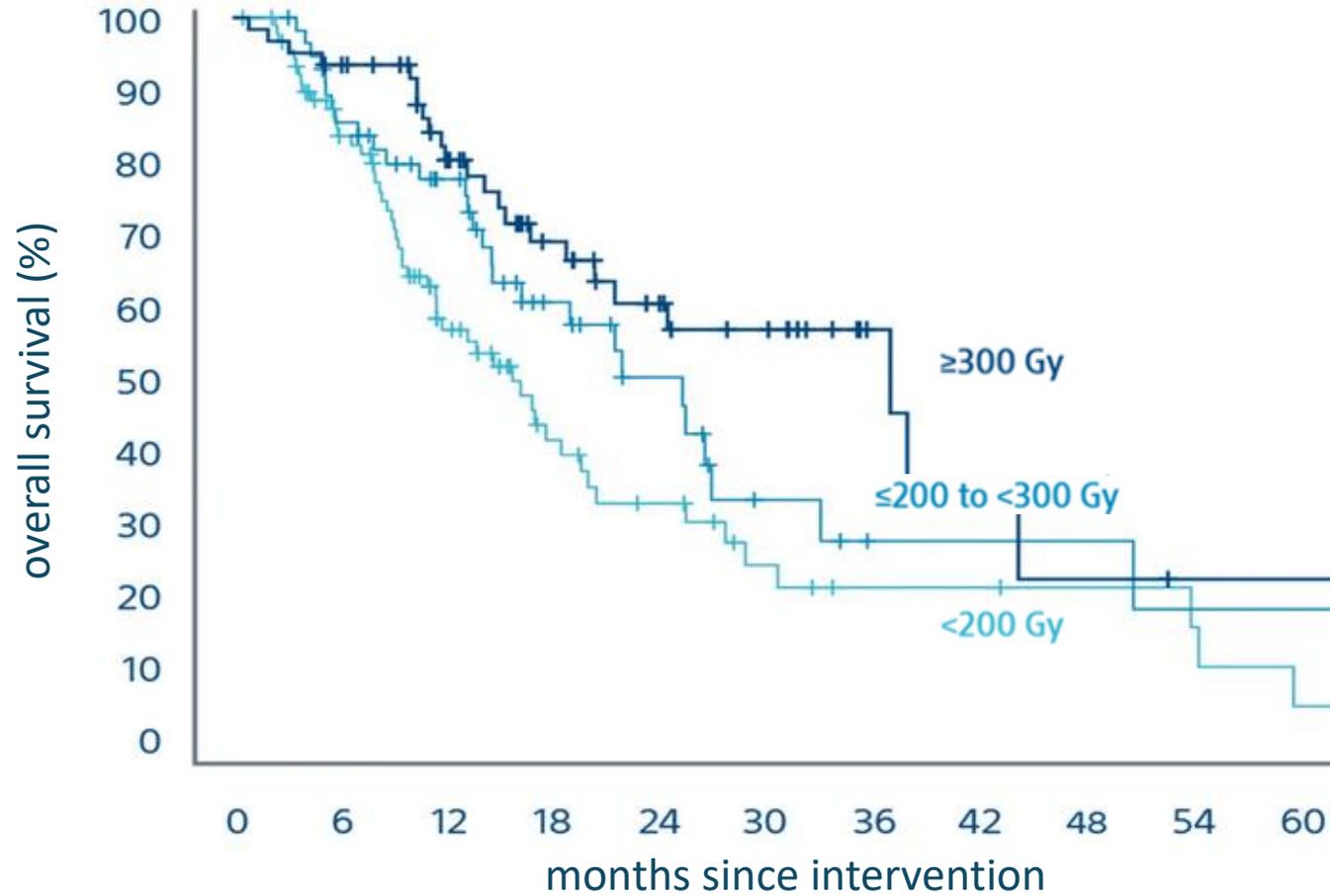
Time to progression



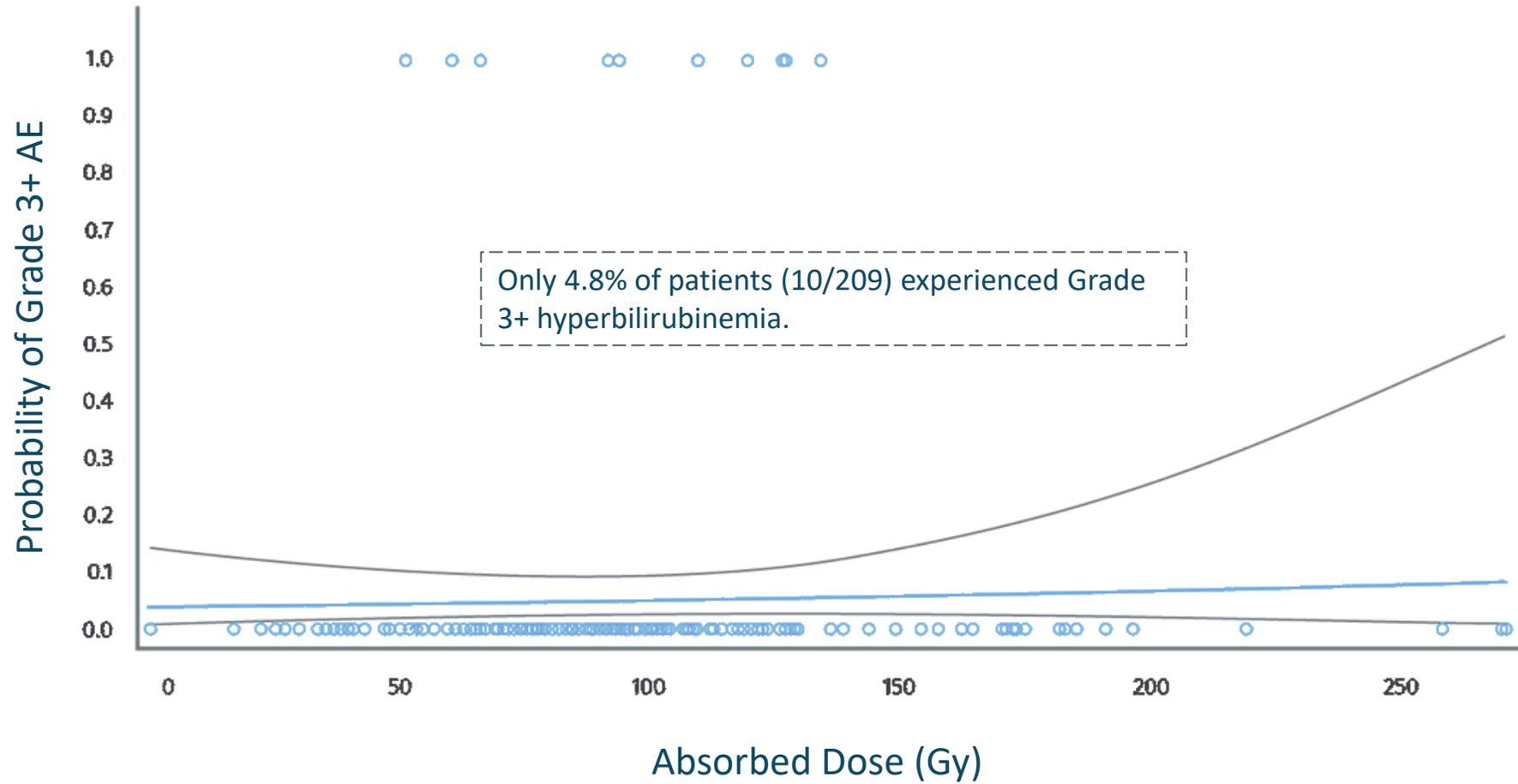
17.1 mo vs. 9.5 mo; HR: 0.36, p=0.002

Median tumor dose is correlated with survival odds

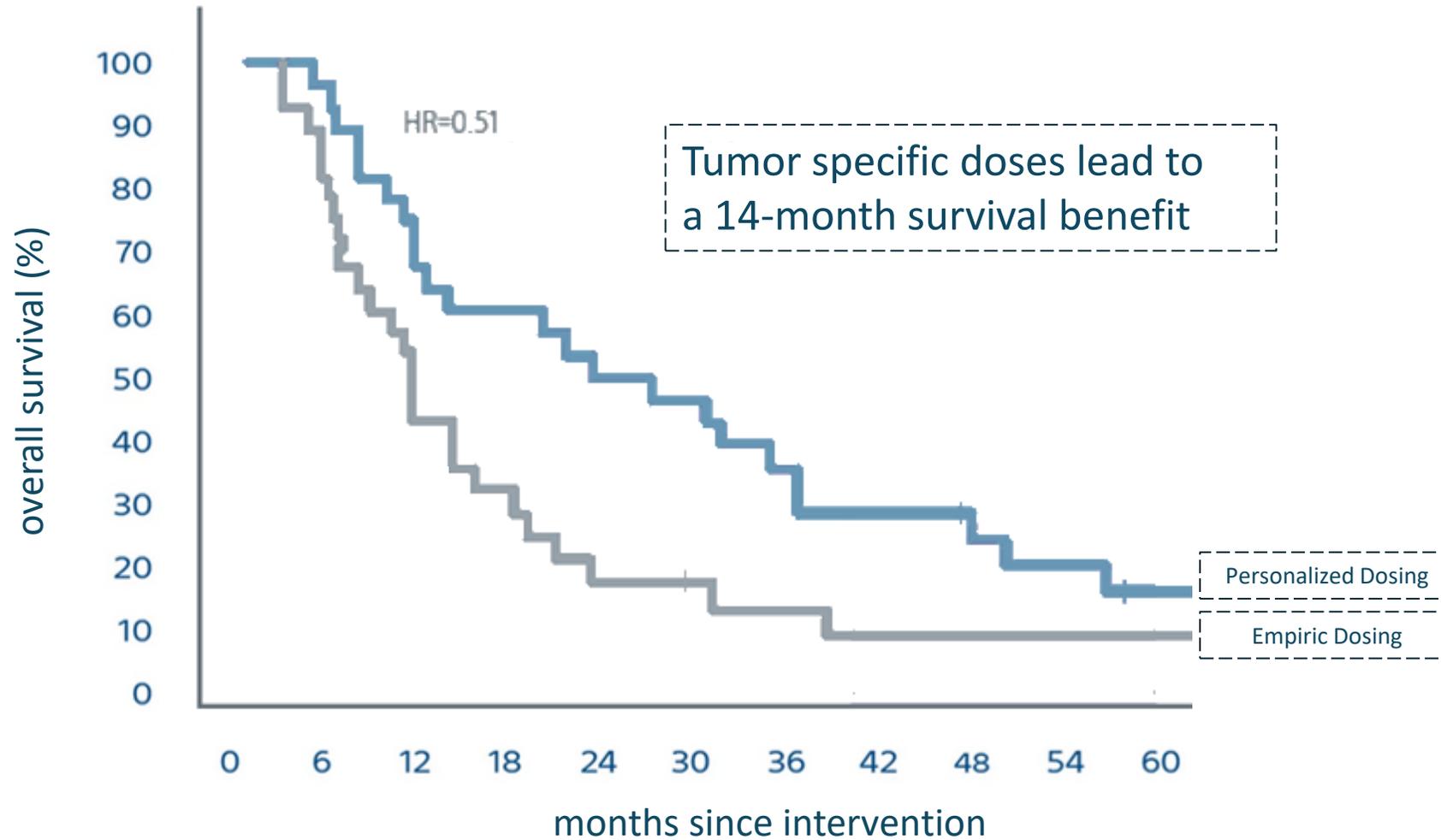
with optimal outcomes seen at doses that are greater than 300 Gy

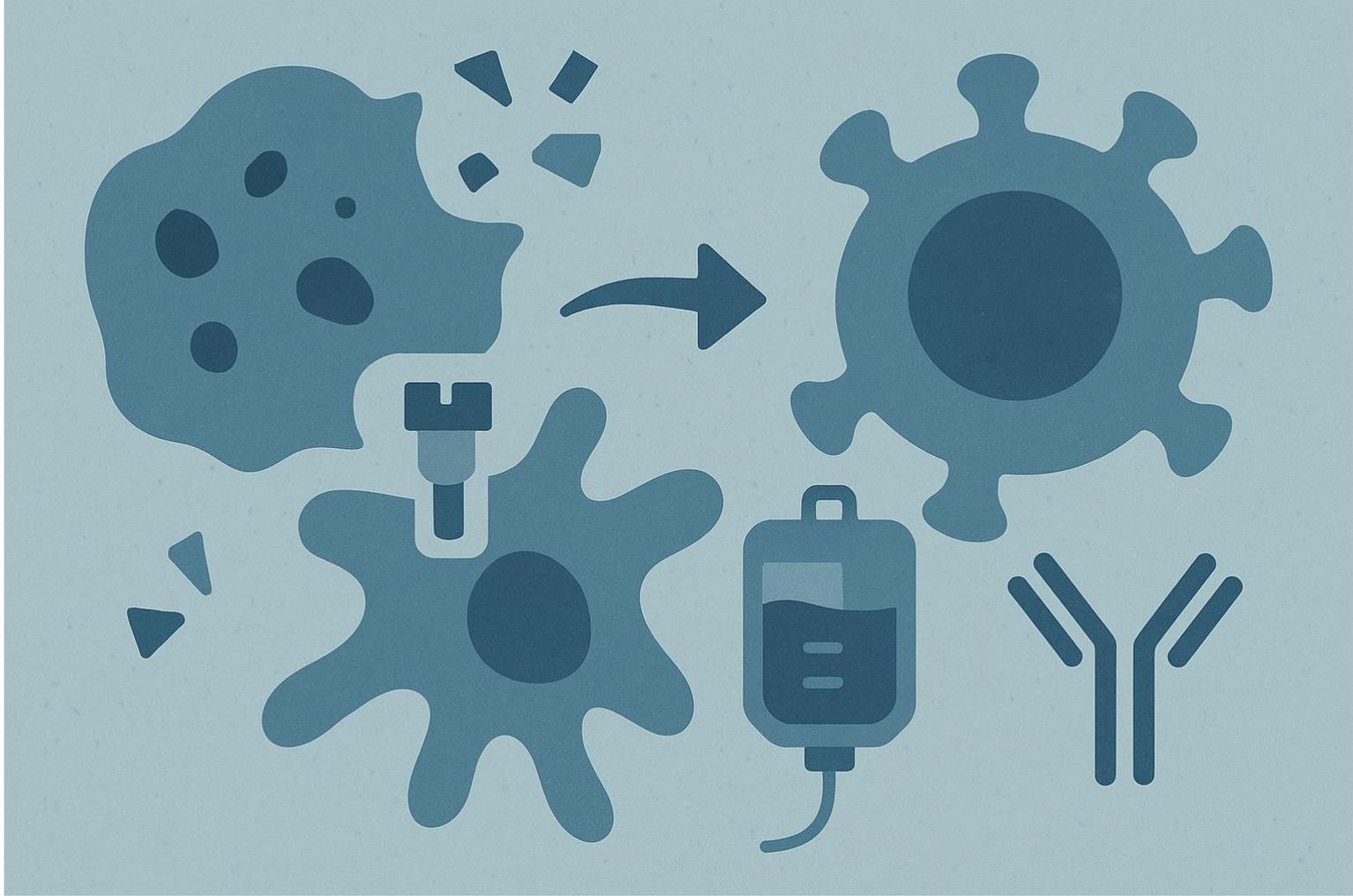


Y90 for intermediate/advanced HCC is safe and effective with very low risks of hepatic failure



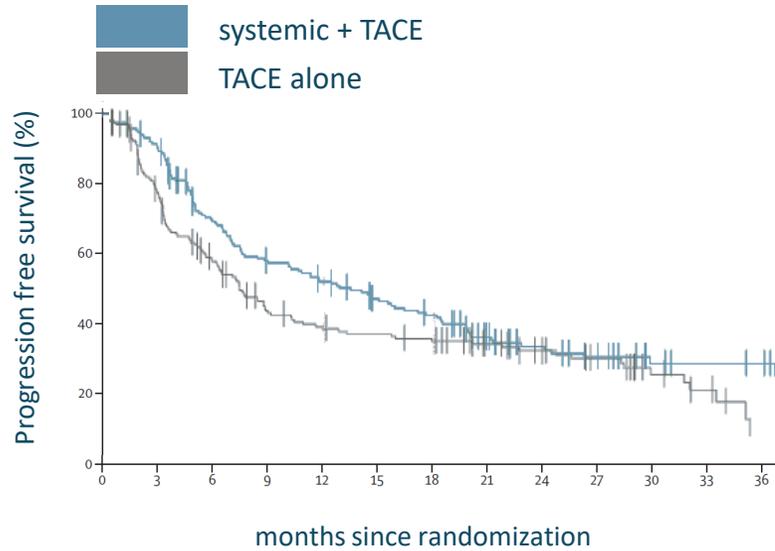
Increased tumor dose is correlated with OS; best at doses >300 Gy for tumors ~10cm in size with TIV



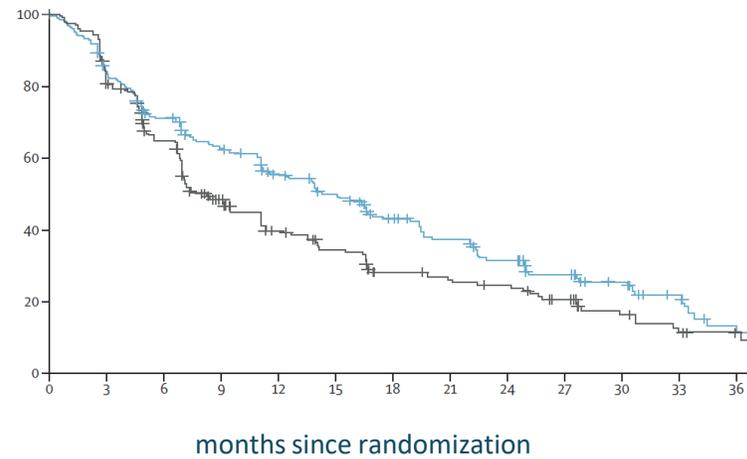


Three randomized trials show **TACE + systemic therapy** prolongs PFS though this comes at the cost of increased toxicity

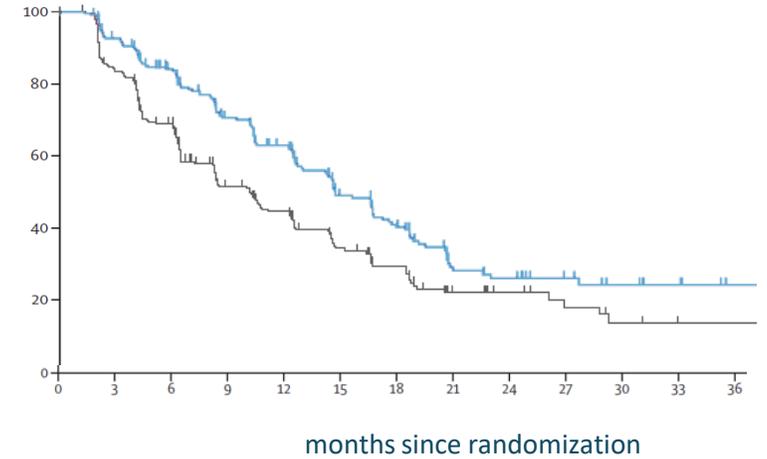
TALENTACE



EMERALD-1



LEAP-012



Percentage of G3+ Adverse Events

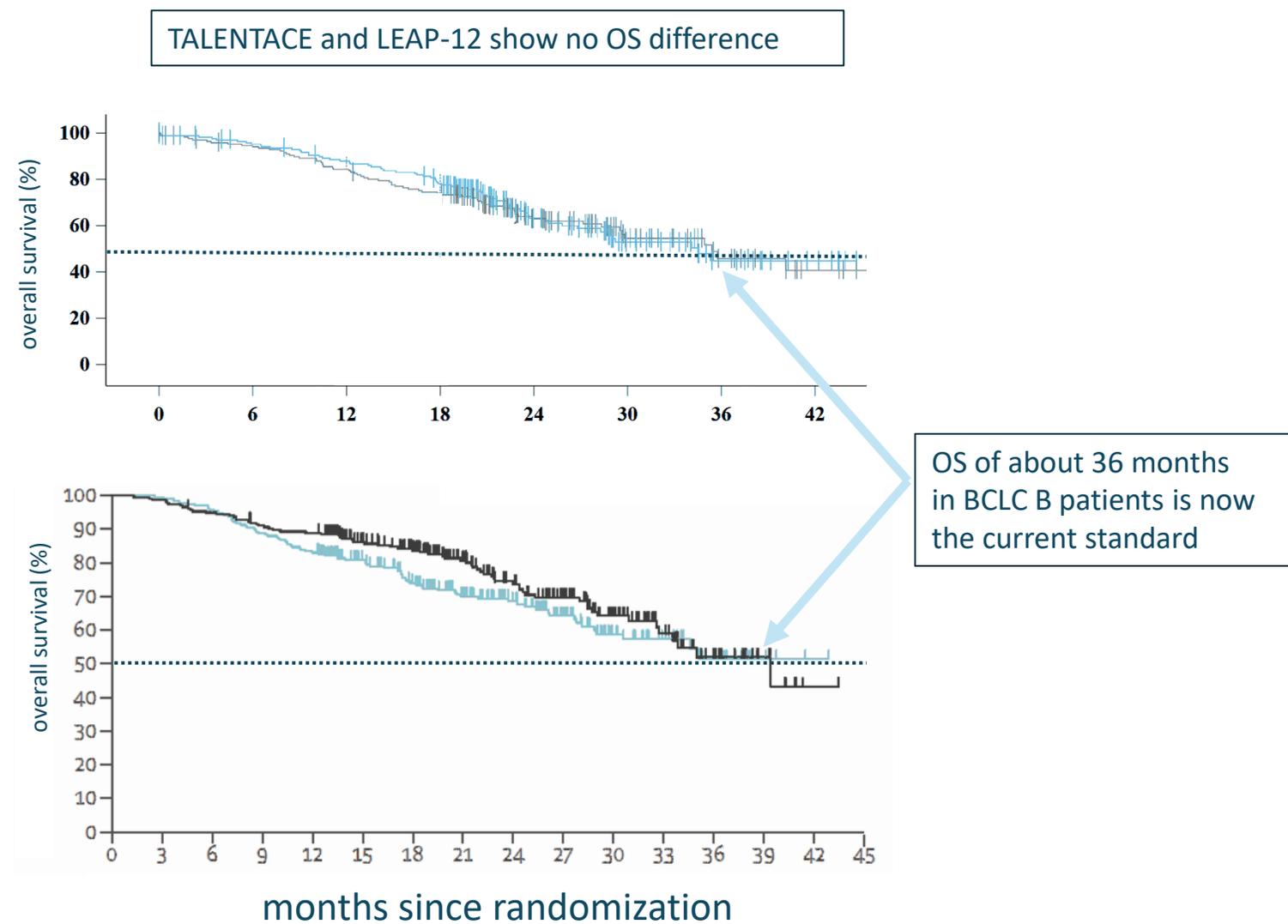
61%
41%

45%
23%

72%
31%

Global randomized trials show TACE + IO is not more effective than TACE → IO

but they do show TACE monotherapy in BCLC B has better OS than previously published



Radioembolization in combination with immunotherapy for HCC shows promise

SOLID (N=24)

- TARE + durvalumab
- Locally advanced HCC (BCLC B or C)

- ORR 83% (CR 29%), DCR was 91.0%
- mPFS was 6.9 months
- **mOS was not reached at 24 mo**

Y90 + pembro (N=27)

embrolizumab

involvement, disease and/or diffuse

- ORR 31%, DCR was 84.6%
- mPFS was 10 months
- **mOS was 27.3 mo**

Emerald Y90 and ROWAN trials are set to have initial results this year!