



Safety, tolerability and efficacy of transarterial chemoembolization using anthracyclines-loaded drug eluting microspheres for treatment of patients with unresectable hepatocellular carcinoma: Pooled Analyses

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Background and Methods

- TACE is indicated for the treatment of unresectable HCC according to latest ESMO guidelines, with level of evidence I A for BCLC B and I B for BCLC 0-A stage ¹.
- LifePearl® microspheres (Terumo Europe, N.V.) is a novel DEM comprised of polyethylene-glycol with good safety profile and efficacy reported in different studies.
- We pooled patient level data from 5 single arm studies (586 patients) most being a real-life registries with liberal patient selection, number of treatments, choice of anthracycline, size of microspheres, follow-up rhythm and modality
- Safety was assessed by close monitoring of adverse events(AEs) according to CTCAE (v4.03)
- Tumor response was evaluated following hospital practice, according to mRECIST (4 studies) and RECIST1.1 (1 study) and analyzed as best overall response (BOR)
- The Kaplan-Meier analysis was used to estimate event rates for time to event outcomes: progression free survival (PFS), time to unTACEable progression (TTUP2) and overall survival (OS)

Limitations: As this pooled analysis was not planned prior to conducting the individual studies, analysis limitations are related to population enrolled and differences in the actual recording of the variables, including frequency, timing and type of imaging, follow-up rhythm and duration

Baseline patient's and procedure characteristics

Variable		Total (N=586)
Age (mean \pm SD, years)		66.8 \pm 10.3
Gender, Male (%)		72.0%
Cirrhosis at baseline (%)		86.3%
Child Pugh Score	A	85.5%
	B	13.5%
	C	1.0%
AFP (mean \pm SD) ng/ml		680 \pm 4,241
AFP > 200ng/ml		18.8%
BCLC Stage		
0-Very Early Stage		13.6%
A-Early Stage		43.4%
B-Intermediate Stage		41.1%
C-Advanced Stage		1.9%

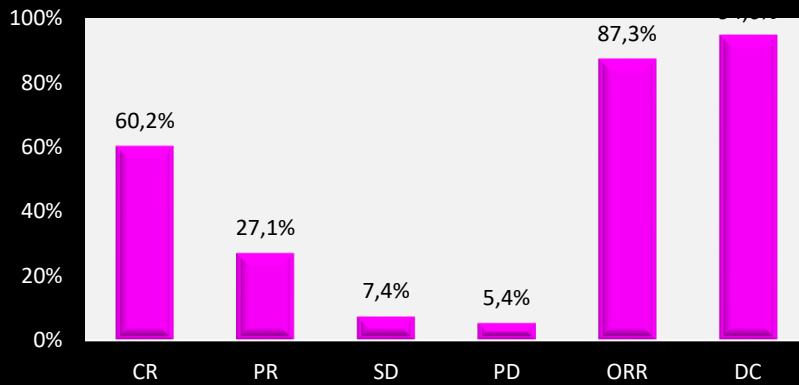
Variable		Total (N=586)
Tumour Characteristics		
Number of tumors (mean \pm SD)		2.1 \pm 1.5
Sum of lesion diameters (mean \pm SD, mm)		49.3 \pm 32.9
Multifocal lesions, %		61%
Type of anthracyclines		
Doxorubicin		96.2%
Idarubicin		3.8%
DEM-TACE number of procedures		
Mean \pm SD		1.9 \pm 1.3
Range		1-10
1 TACE		44.9%
2 TACE		32.0%
\geq 3 TACE		23.1%

Results

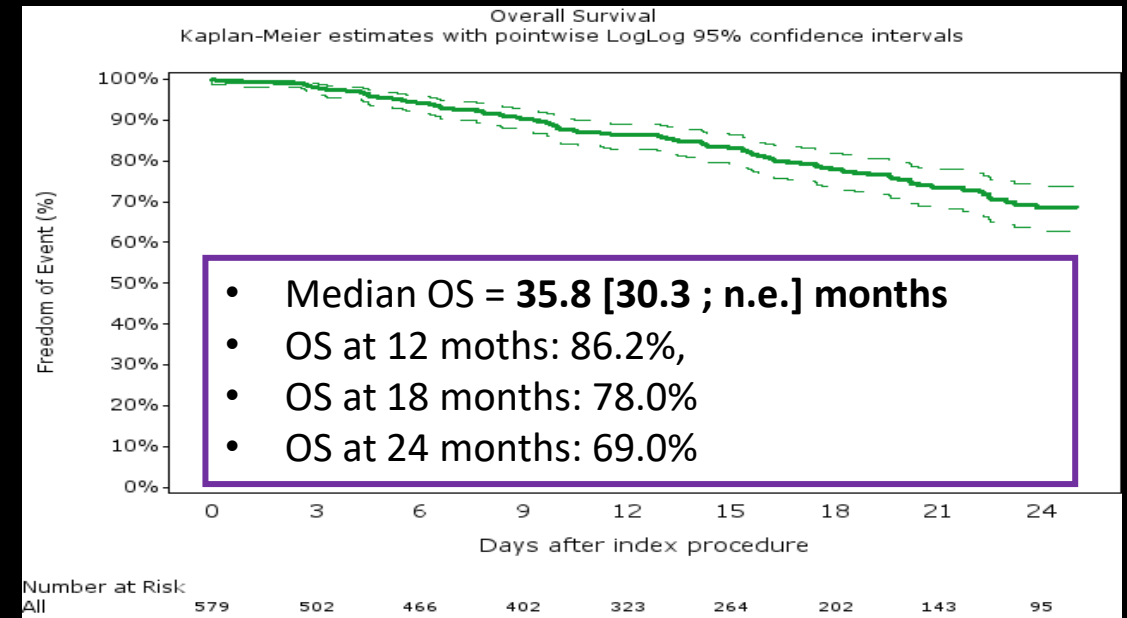
Adverse Events:

- Reported for 197 patients (33.6%)
- 2.6% were grade 4 and 1.5% were grade 5
- There were 1.4% haematological toxicities, all grade less than 3
- The most frequent AE were related to post-embolization syndrome

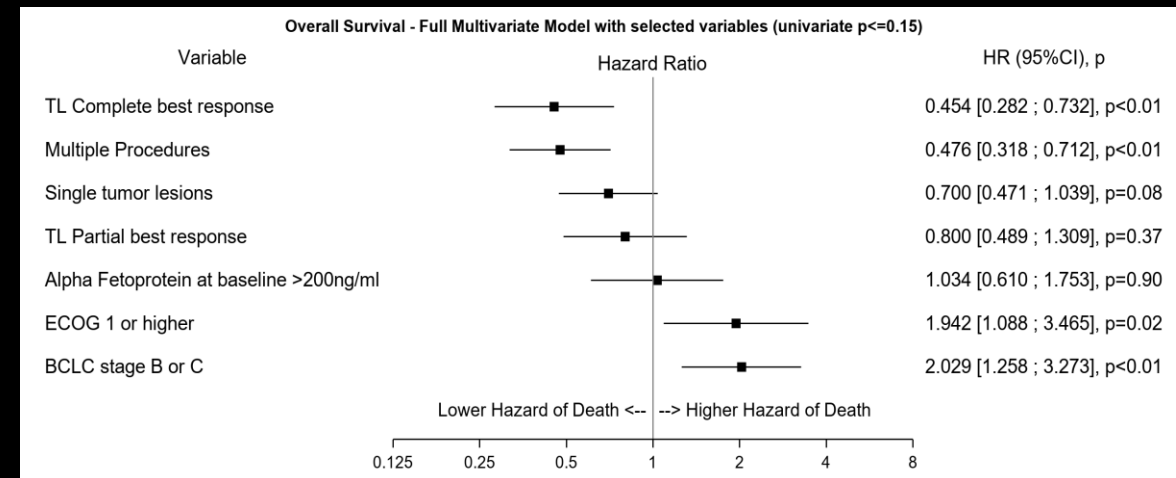
Best tumor response (n=558)



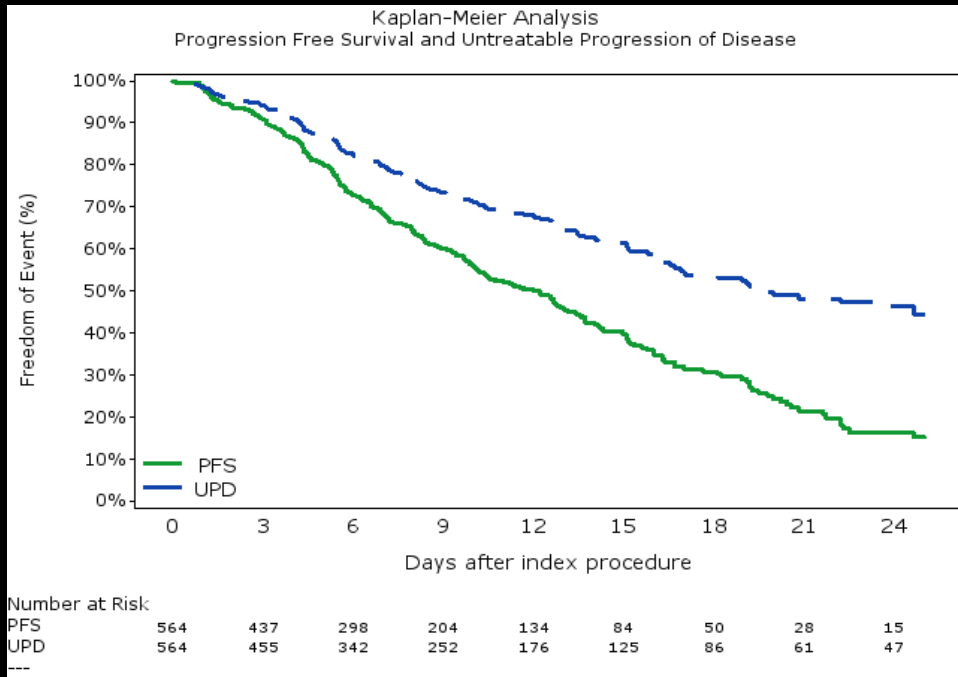
Overall Survival



Predictive Factors - Overall Survival

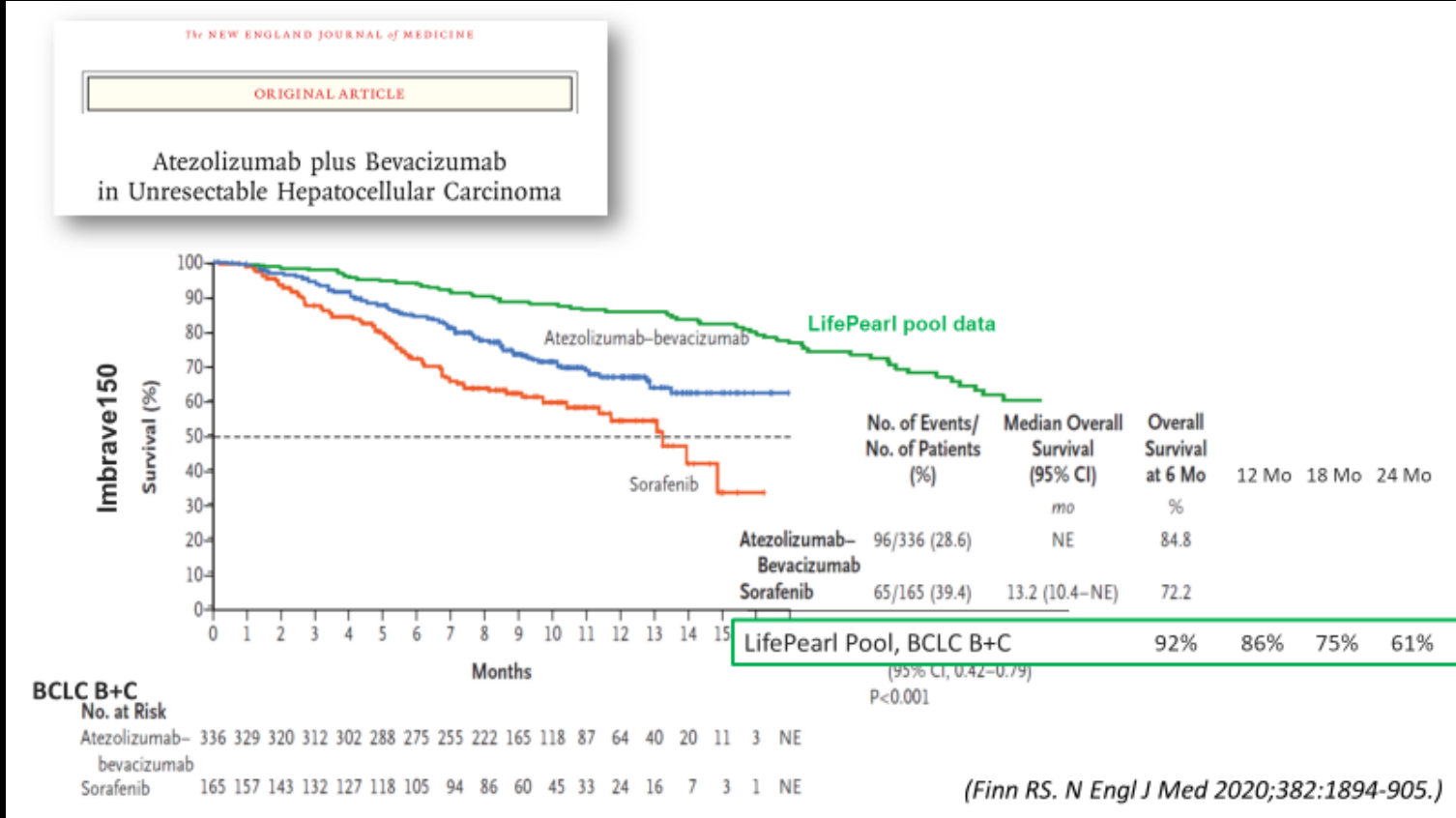


Results



The median PFS: 12.0 [10.1 ; 13.4] months

The median TTUP: 19.4 [16.7 ; 28.3] months



Conclusions

- The sustained release of anthracyclines and durable embolization from LifePearl™ microsphere makes LifePearl™ TACE an efficient and safe treatment option for patients with an early and intermediate stage HCC
- The data from 586 patients treated for unresectable HCC with LifePearl™ microspheres loaded with doxorubicin or idarubicin showed:
 - 57% of treated patients in BCLCC 0/A stage clearly demonstrates treatment stage migration in a real life
 - Good tolerance and acceptable toxicity
 - High tumor response rate that translated into promising PFS, TTUP and OS
 - Overall survival observed in this analysis is among the best OS observed in recent TACE trials and meta-analyses Waked I. et al. Br J Cancer. 2017; 116(4): 448–454; Golfieri R. et al. Br J Cancer 2014;111:255-64; Kudo M et al. Lancet Gastroenterol Hepatol 2018; 3: 37-46
- Newest systemic therapies for HCC prolong survival and a key question remains how to further extend timing for initiating those therapies to achieve even higher impact on OS of patients with HCC.