

Assessing the time-varying impact of hepatocellular carcinoma on survival following liver transplantation

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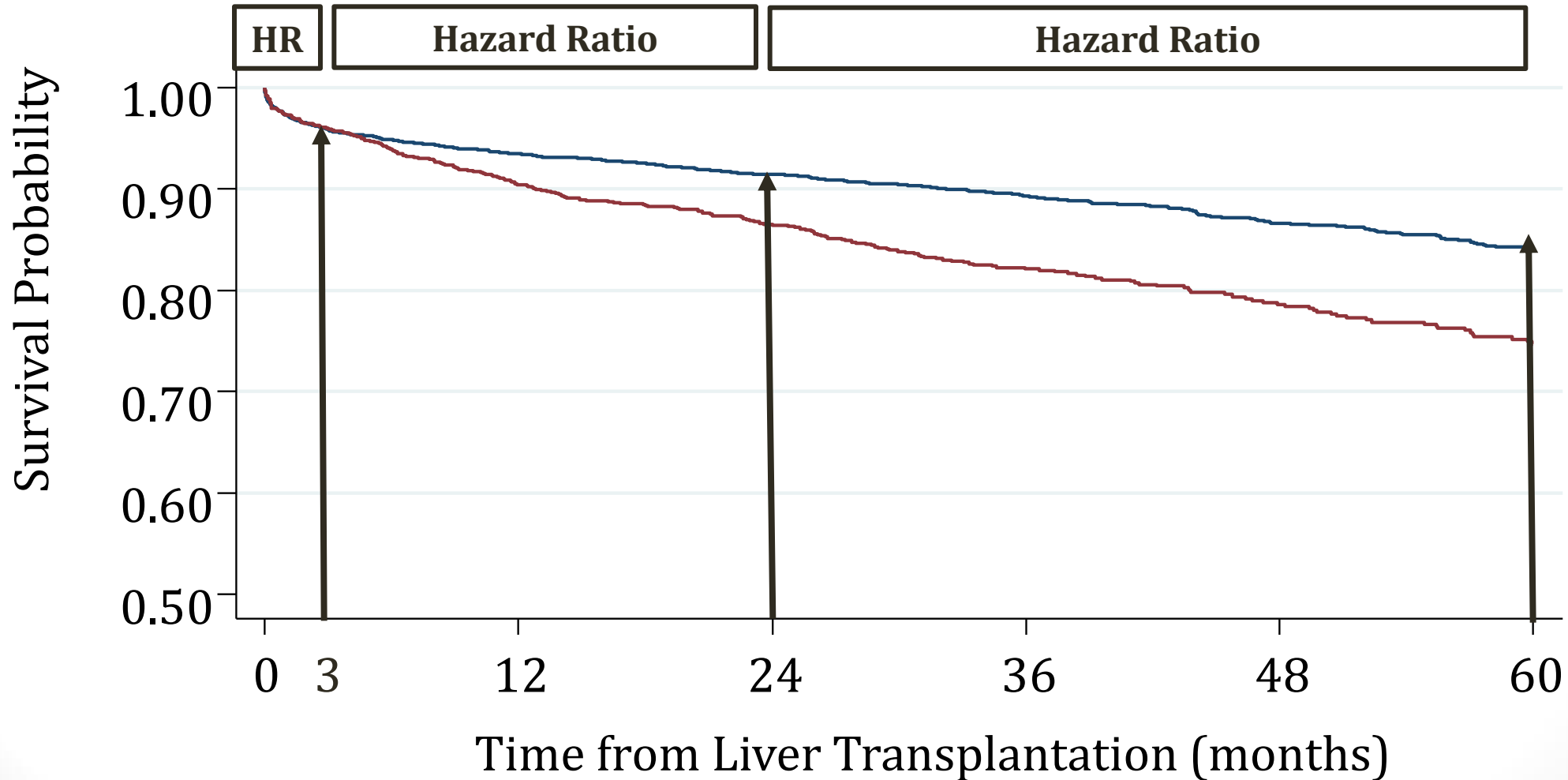
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Background

- Post-transplant survival worse in HCC patients than non-HCC patients.
- Prognostic impact of HCC varies according to time after transplantation.
- Milan Criteria introduced to identify HCC patients with 'acceptable' post-transplant outcomes.
- We assessed:
 - Time-varying impact of HCC on posttransplant survival
 - In patients transplanted in the UK and Ireland between 2007 and 2016

Relative risks at different periods after transplantation



Recipient Factors

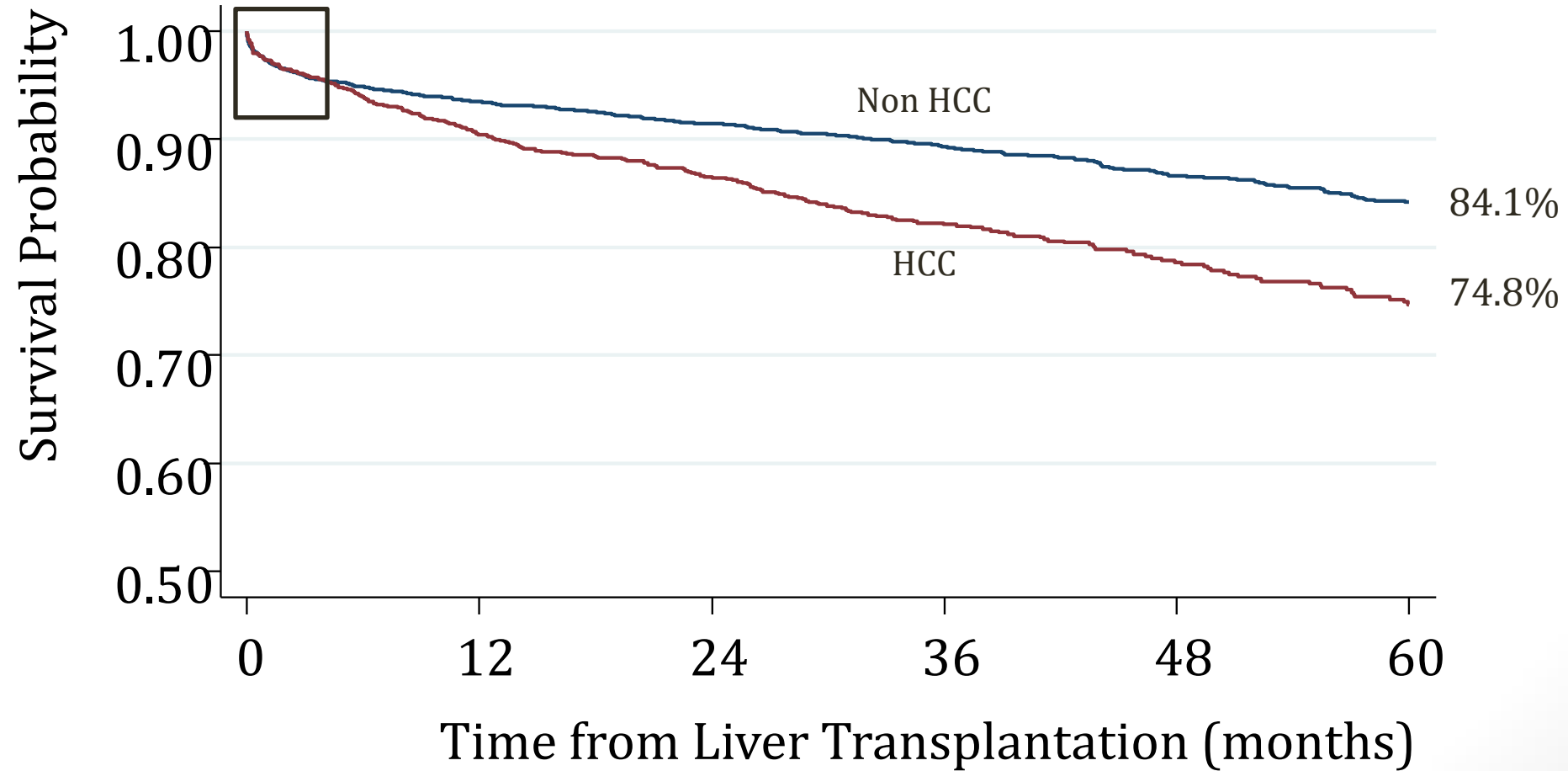
Indication Group	HCC	Non-HCC
Number	N = 1397	N = 4383
Median age	59	53
Male sex	80.5%	62.3%
Non-white	16.7%	11.2%
HCV positive	43.4%	12.4%
Ascites	29.8%	61.5%
Encephalopathy	13.6%	33.7%
Median UKELD	50	55

Donor Factors

Indication Group	HCC	Non-HCC
Number	N = 1397	N = 4383
DCD Liver	27.9%	18.9%
Segmental Graft	10.1%	6.7%
Abnormal organ appearance	26.3%	22.2%

5- year Patient Survival

5649 Recipients



Time-varying impact of HCC on post-transplant survival

	Adjusted hazard ratio (95% CI)			p value time dependency
Post-transplant survival	0 to 3 months	3 to 24 months	24 to 60 months	
HCC compared to non-HCC	0.79 (0.56-1.12)	1.82 (1.35-2.46)	1.68 (1.21-2.34)	<0.001

Cause of death in HCC patients

Time post-transplant	0 to 3 months	3 to 24 months	24 to 60 months	
Death from any cause	53	107	75	235
Death from HCC recurrence	0 (0%)	29 (27%)	14 (19%)	43 (18%)

Summary

Compared to non-HCC patients, HCC patients transplanted between 2007 and 2016 in UK and Ireland:

- Are in better condition at time of transplantation

BUT

- Receive a higher proportion of sub-optimal livers

- Same outcome immediately after transplantation

BUT

- 5-year mortality: HCC 1 in 4 and non-HCC 1 in 6 patients