

AUDITING THE UK 50 % FIVE YEAR SURVIVAL CRITERION FOR REGISTERING ELECTIVE LIVER PATIENTS IN THE UK

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Background: Since November 1999, the criteria for registering patients onto the national liver transplant list have included the requirement that patients should be offered a transplant only if the clinician feels that they have a greater than 50% probability of survival at five years post-transplant. A statistical model to audit registrations made onto the liver transplant list has been developed to assess adherence to this criterion.

Methods: Data were obtained from the National Transplant Database on 3221 adult Group 1 elective liver recipients transplanted in the UK, 1994-2002. First cadaveric heartbeating liver only transplants were considered. The data were divided into three datasets. A *modelling set* comprising 1289 recipients transplanted 1994-1997, *set 1* (pre-introduction of criterion) comprising 776 recipients transplanted 1998-1999 and *set 2* (post-introduction of criterion) comprising 1156 recipients transplanted 2000-2002. A multifactorial Cox model was developed using the *modelling* dataset to identify patient factors that significantly affect five-year liver transplant survival. The model was then fitted separately to *sets 1* and *2*, and patients were allocated into one of four pre-defined groups: 'met the criterion', 'borderline but met the criterion', 'borderline but did not meet the criterion' and 'did not meet the criterion'.

Results: The factors included in the final model were recipient primary liver disease, urea and albumin. For *set 1*, 674 (87%) of 776 individual patients were deemed to have met the criterion, 55 (7%) were borderline but met the criterion, 32 (4%) were borderline but did not meet the criterion and 15 (2%) did not meet the criterion. Of those 15 who did not meet the criterion, 9 (60%) have since experienced graft failure or died within two years post-transplant. An analysis of *set 2* showed similar results.

Conclusions: A model capable of auditing whether transplanted recipients met the 50% five year survival criterion has been developed. This model classifies patient types and individual patients into one of four levels of adherence to the 50% criterion. Only 2% and 1% of recipients transplanted in *sets 1* and *2*, respectively, were classified as not having met the 50% five year survival criterion. The listing of such patients could be questioned, but in general the results suggest that the 50% criterion is being adhered to.