

LIFE EXPECTANCY OF LIVER TRANSPLANT RECIPIENTS IN THE UK

KM Barber, JE Allen, D Collett and J Neuberger

On behalf of the UK Transplant Liver Advisory Group, UK Transplant, Bristol, BS34 8RR, United Kingdom

Background: Liver transplantation is associated with a substantial improvement in length of life for patients with liver disease, but how the long-term survival compares with that of the general population is unknown. The aim of this study is to compare the life expectancy of liver transplant recipients to that of the UK population.

Methods: Data were obtained from the National Transplant Database on 4,322 non-cancer recipients who had survived the first 6-months after their first elective deceased heartbeating liver only transplant in the UK (1985-2003). Patient survival time was calculated as time from first liver transplant to patient death. A parametric model for the survival times was used to estimate the median life expectancy for different combinations of patient age, sex and year of transplant.

The life expectancy for various age, sex and year combinations for the UK population were obtained from The Office for National Statistics¹. Using these data a regression model was developed to predict the life expectancy for age, sex and year combinations within the range covered by the liver transplant data. The predicted life expectancies were weighted according to the distribution of age, sex and year of transplant of patients in the liver dataset.

Results: Since the 15 year survival estimate of the 649 paediatric recipients in the liver dataset is 82%, it is not practicable to use statistical models to estimate their median survival time. The analysis was therefore based only on the 3,673 adult recipients for whom the 15 year patient survival rate was 58% (95% CI 54-62%).

Although no account has been taken of improvements in the management of recipients and the changing pattern of liver disease, results suggest that adult liver transplant recipients have an average life expectancy of 22 years. The average life expectancy of the equivalent UK adult population is 30 years, and so on average 8 years of life are lost. Furthermore, female recipients lose fewer life-years than male recipients, and younger recipients lose more life-years than older recipients.

Reference: ¹The Office for National Statistics (2004) Table 5.1 Expectation of life at birth & selected age. *Population Trends* [online], 117 (V2), 62. Available from: http://www.statistics.gov.uk/downloads/theme_population/PT117_V2.pdf [Accessed 01/11/2004].