NHS BLOOD AND TRANSPLANT

BOWEL ADVISORY GROUP

PATIENT SURVIVAL AFTER INTESTINAL TRANSPLANT

INTRODUCTION

1 This regular paper reports on patient survival following intestinal transplantation for transplants performed nationally. The period analysed was 1 January 2001 to 31 December 2016, in which 184 elective intestinal transplants were carried out in first time recipients. Follow-up data were available on the UK Transplant Registry (UKTR) as at 24 January 2017 for 178 (97%) patients.

DATA ANALYSIS

2 Kaplan-Meier survival functions were produced separately for paediatric and adult patients and within these cohorts, by transplant type and era. Short/medium-term survival rates are displayed within the plots. The results are based on small numbers, are not risk-adjusted and on the whole are not statistically significant so for these reasons should be treated as guidance only.

3 The key messages are:

- 5 year survival rate estimates for paediatric and adult elective intestinal transplant recipients are 59.1% and 54.9%, respectively (**Figure 2**). **Figure 1** shows the respective 90 day and 1 year survival rate estimates.
- Short-term outcomes appear to have improved over the analysis time period for paediatric transplant recipients (**Figure 3**). This was not evident for adult transplant recipients (**Figure 5**), however there were none performed in the first 5 years.
- Bowel only (BO) transplants appear to have superior short-term outcomes compared with multivisceral (MV) or liver, bowel and pancreas (LBP) transplants and modified multivisceral (MMV) or bowel and pancreas (BP) transplants (**Figure 4** and **Figure 6**). However, note that there were too few paediatric BP or MMV transplants to be included in **Figure 4**.

4 Additional information:

- There have been 6 super-urgent intestinal transplants performed in the UK to date in 5 different patients. Death has been reported for 2 of these patients (**Table 1 (removed as patient specific)**).
- There have been 21 transplants including abdominal wall in the time period into 20 different adult patients: 11 bowel only and 10 not including the liver[1]. Twenty (95%) of these transplants have been performed at the Oxford transplant unit and the rest at Cambridge. **Table 2 (removed as patient specific)** presents the causes of death of the abdominal wall recipients who died. **Figure 7** shows the Kaplan-Meier survival function for abdominal wall recipients.
- A variety of causes of death have been reported to the UKTR for the 65 patients who are deceased following intestinal transplantation (**Table 3 (removed as patient specific)**).

ACTION

5 Members are asked to note the significantly lower survival at 90 days for adult recipients in the recent era in Figure 5. Timely provision of three-month and annual follow-up data will aid more accurate estimation of outcomes following intestinal transplantation in the UK.

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Statistics and Clinical Studies **February 2017**

[1] In addition, we are aware of at least two cases of abdominal wall only registrations in the time period. Transplant and outcome data are not available for this type of transplants in the UKTR.

Figure 1 **90 day and 1 year patient survival following intestinal transplantation, by age group**

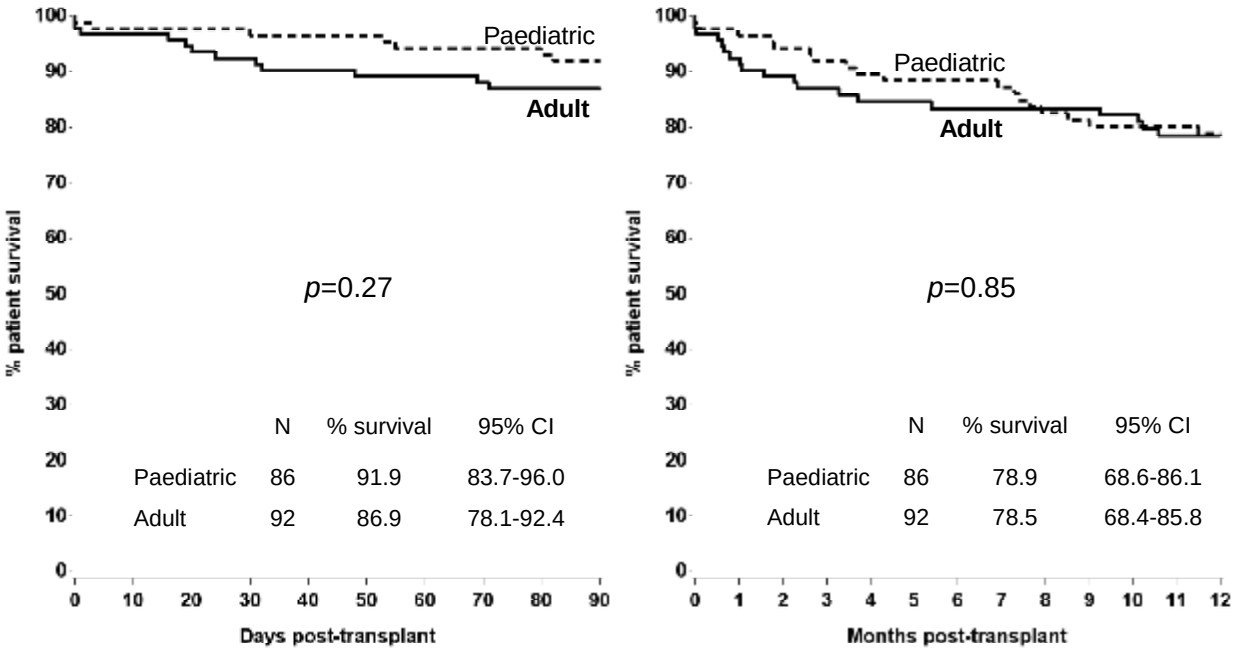
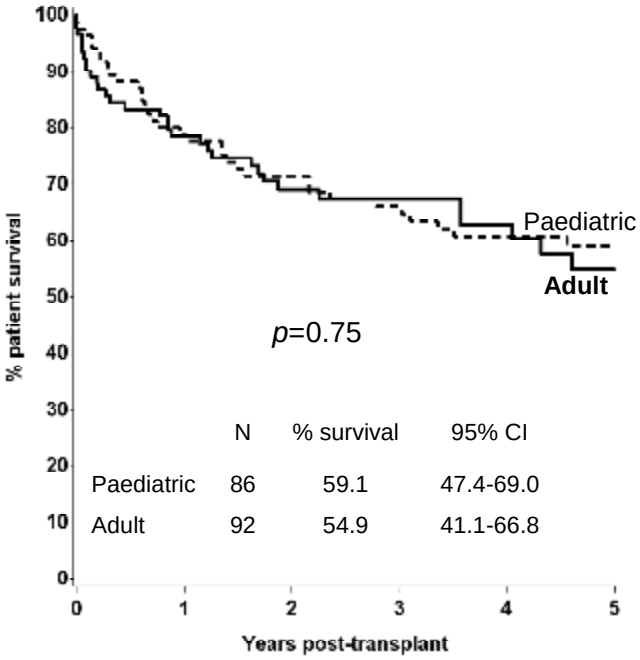


Figure 2 **5 year patient survival following intestinal transplantation, by age group**



PAEDIATRIC PATIENTS

Figure 3 **90 day and 1 year paediatric patient survival following intestinal transplantation, by transplant era**

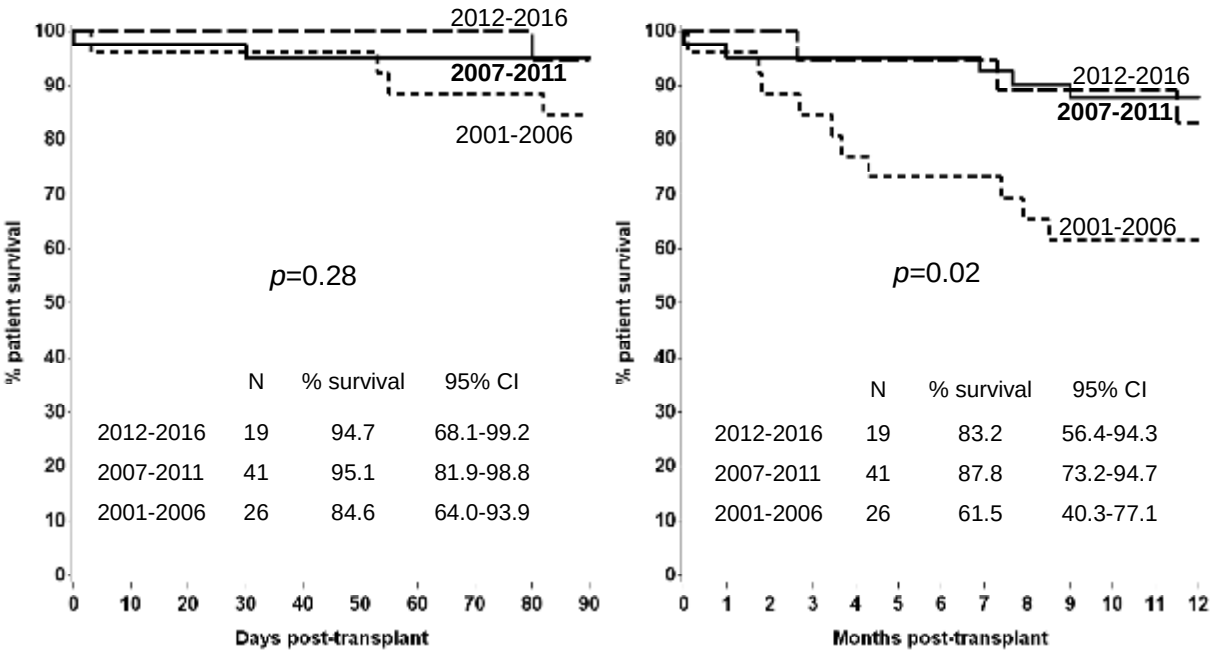
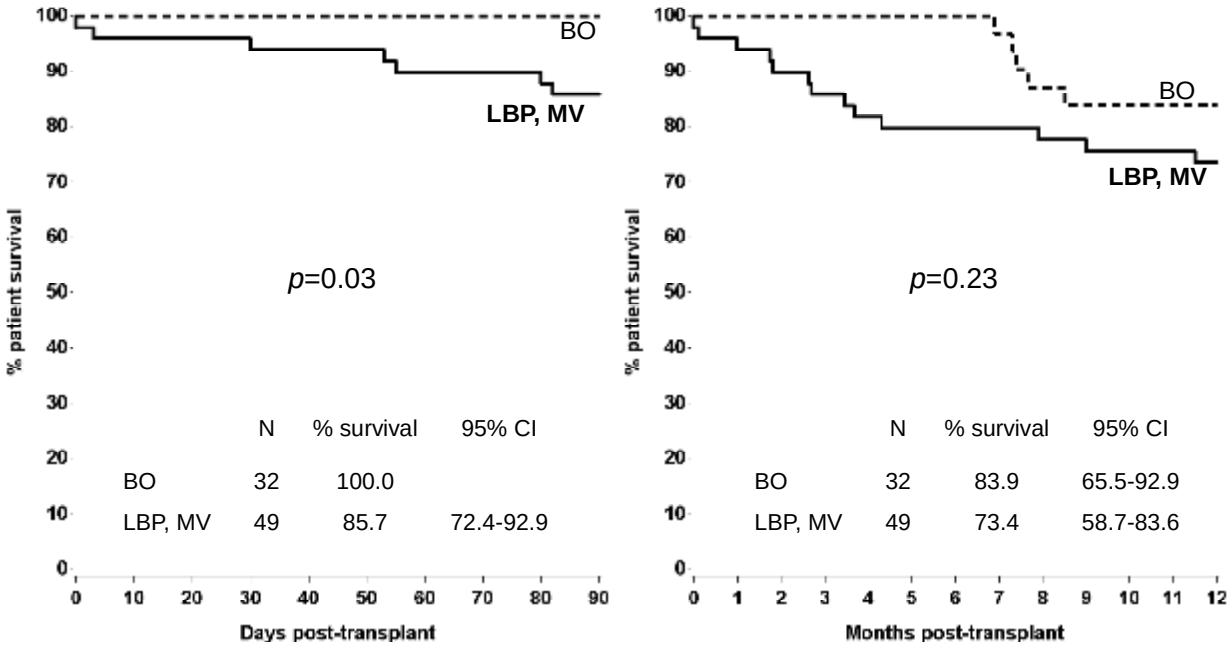


Figure 4 **90 day and 1 year paediatric patient survival following intestinal transplantation, by transplant type**



ADULT PATIENTS

Figure 5 **90 day and 1 year adult patient survival following intestinal transplantation, by transplant era**

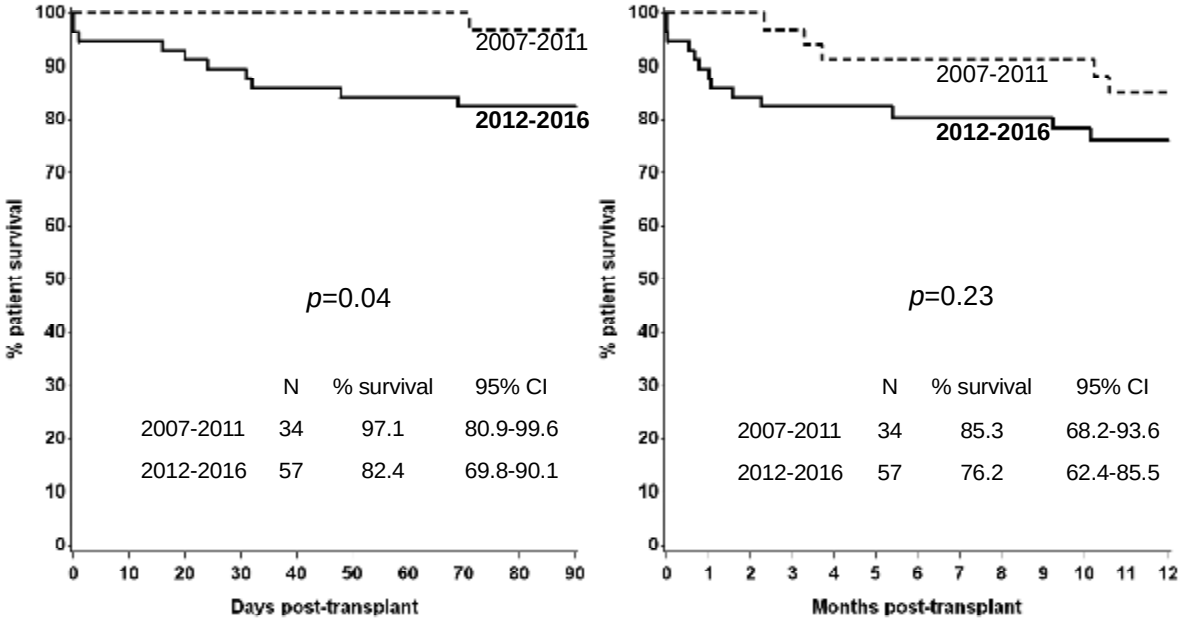
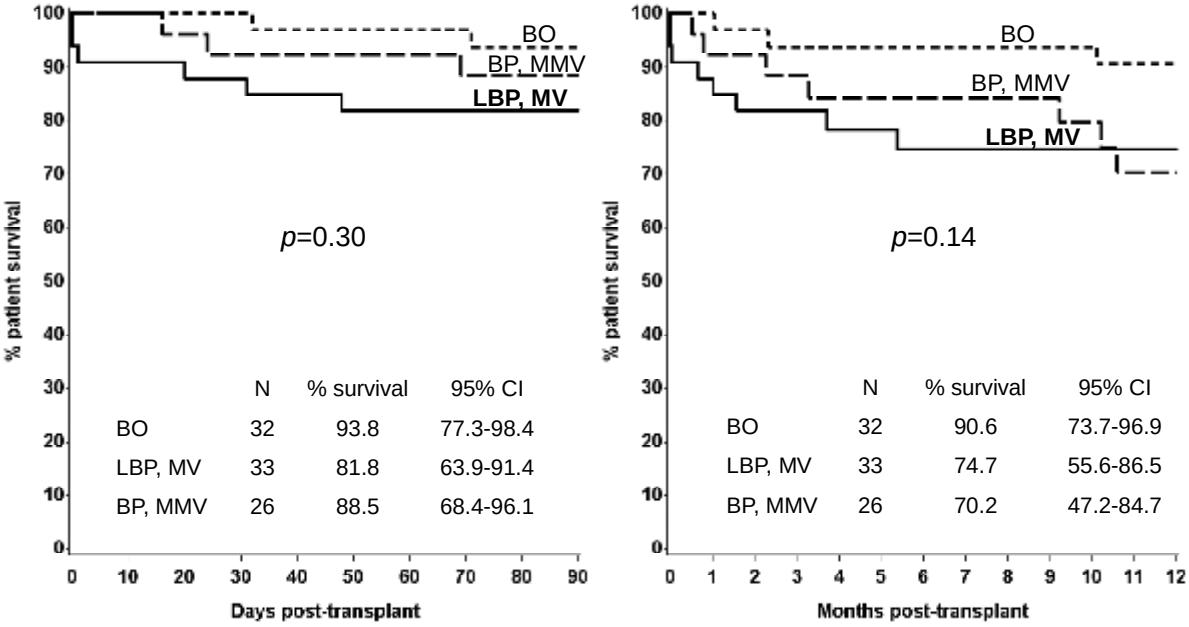


Figure 6 **90 day and 1 year adult patient survival following intestinal transplantation, by transplant type**



ABDOMINAL WALL PATIENTS

Figure 7 90 day and 1 year adult patient survival following abdominal wall transplantation