

**NHS BLOOD AND TRANSPLANT  
ORGAN DONATION AND TRANSPLANTATION DIRECTORATE**

**PANCREAS ADVISORY GROUP**

ORGAN DAMAGE

SUMMARY

**INTRODUCTION**

- 1 At the April 2017 meeting there was an action to investigate the level of damage reported for organs intended for whole pancreas transplantation. This paper reports on the information provided in the 'Pancreas Damage' sections by the retrieval team and recipient transplant centre, Sections 4 and 12 respectively, of the Deceased Donor Pancreas Information Form for pancreases that were accepted for whole pancreas transplantation. Although the section of the form is entitled 'Pancreas damage' some of the questions relate to organ quality.

**DATA**

- 2 Data on 305 donors between 1 April 2016 and 31 March 2017 whose pancreas was taken and accepted for whole pancreas transplantation were analysed from the UK Transplant Registry (UKTR).

**RESULTS**

- 3 Of the 305 donor pancreases accepted for transplantation and retrieved, 177 (58%) were transplanted and 128 (42%) were not used.
- 4 Of the 305 donors, 216 (71%) had forms returned reporting information on organ quality and damage recorded by the recipient centre and the majority 163 (75%) were for organs transplanted. Of these 216, 70 (32%) had at least one type of damage/quality issue. The most common type was 'Pancreas fatty' (12%). 'Pancreatic capsule damage' and 'Other damage' were reported in 9% of cases.
- 5 214 (70%) of the 305 pancreases had a pancreas donor information form, that reported information from both the retrieval and recipient centres, received by ODT Information Services. When comparing the organ quality and damage reported by retrieval and recipient centres, there were some discrepancies, ranging from 2% to 18% across the damage/ quality issues reported.

**ACTION**

- 6 Members are asked to ensure fully completed forms are returned to ODT Information Services. Members are also asked to consider the information presented and make any recommendations as appropriate.

**NHS BLOOD AND TRANSPLANT  
ORGAN DONATION AND TRANSPLANTATION DIRECTORATE**

**PANCREAS ADVISORY GROUP ISLET STEERING GROUP**

**ORGAN DAMAGE**

**INTRODUCTION**

- 7 At the April 2017 meeting there was an action to investigate the level of damage reported for organs intended for whole pancreas transplantation. This paper reports on the information provided in the 'Pancreas Damage' sections by the retrieval team and recipient transplant centre, Sections 4 and 12 respectively, of the Deceased Donor Pancreas Information Form for pancreases that were accepted for whole pancreas transplantation. Although the section of the form is entitled 'Pancreas damage' some of the questions relate to organ quality.

**DATA**

- 8 Data on 305 donors between 1 April 2016 and 31 March 2017 whose pancreas was taken and accepted for whole pancreas transplantation were analysed from the UK Transplant Registry (UKTR).

**RESULTS**

- 9 Of the 305 donor pancreases accepted for transplantation and retrieved, 177 (58%) were transplanted and 128 (42%) were not used.
- 10 Of the 305 donors, 216 (71%) had forms returned reporting information on organ quality and damage recorded by the recipient centre and the majority 163 (75%) were for organs transplanted. Of the 216 cases, 70 (32%) had at least one type of damage/ quality issue.
- 11 **Table 1** shows the pancreas damage and quality questions and answers recorded. Of the nine questions asked none had a 100% completion rate, with 'Other damage' having the lowest completion rate of 64% and the remaining questions having completion rates between 87% and 89%.
- 12 The pancreas was reported as 'Fatty' in 12% of cases and was the most common type of quality issue reported. 'Pancreatic capsule damage' and 'Other damage' were reported in 9% of cases and only 1% reported 'Pancreatic inflammation' or 'Pancreatic oedema'. In **Appendix I, Table 1a** and **1b** show the same information for those organs accepted and not used and those organs transplanted, respectively.
- 13 For the 216 organs, the length of the portal vein was reported in 161 (75%) of cases and the median length was 12mm with interquartile range (IR) between 10mm to 20mm.

- 14 In the 20 cases where other damage was indicated, specific comments were given including damage to or disease of the donor iliac artery and iliac vessels, tail not perfused and granular texture of tail.

Pancreas quality/damage	Answer reported								Total
	Yes		No		Unknown		Not reported		
	N	%	N	%	N	%	N	%	
Pancreas fatty	25	12	160	74	4	2	27	13	216
Pancreatic capsule damage	19	9	170	79	3	1	24	11	216
Haematomas	14	6	175	81	3	1	24	11	216
Hepatic artery from SMA	12	6	170	79	10	5	24	11	216
Parenchymal damage	7	3	181	84	3	1	25	12	216
Damage to arterial supply	4	2	184	85	3	1	25	12	216
Pancreatic inflammation	2	1	182	84	5	2	27	13	216
Pancreatic oedema	2	1	186	86	3	1	25	12	216
Other damage	20	9	102	47	16	7	78	36	216

- 15 Of the 305 pancreases accepted for transplantation, 214 (70%) had a pancreas donor information form, that reported information from both the retrieval and recipient centre, received by ODT Information Services.
- 16 **Table 2** shows the comparison in quality/ damage that was reported at retrieval and by recipient centre for whole pancreases that were accepted. There were overall discrepancies in reporting ranging from 2% to 18% across the quality/ damage categories. Please be aware that percentages presented may not add up to 100% due to rounding.
- 17 There is some discrepancy between quality/ damage reported at retrieval ('Yes') but not reported by recipient centre ('No'). This discrepancy occurred in 8% of cases for 'Hepatic artery from SMA' and in 5% of cases for 'Other damage'. 'Parenchymal damage', 'Damage to arterial supply', 'Pancreatic inflammation' and 'Pancreas oedema' had the lowest percentage of this difference at 1%.
- 18 Discrepancies between quality/ damage that was not reported at retrieval ('No'), but was reported by recipient centre ('Yes'), occurred in 13% of cases for 'Other damage', 7% of cases for 'Pancreatic capsule damage' and 6% of cases for 'Haematomas'. 'Pancreatic inflammation' and 'Pancreas oedema' had the lowest percentage of a difference at 1%.
- 19 In **Appendix II, Table 2a** and **2b**, show the information separately for those organs accepted and not used and those organs transplanted, respectively.

## ACTION

- 20 Members are asked to ensure fully completed forms are returned to ODT Information Services. Members are also asked to consider the information presented and make any recommendations as appropriate.

**Table 2 Comparison between pancreas quality/damage reported at retrieval and at the recipient end for a pancreas that was accepted for a whole pancreas patient, 1 April 2016 - 31 March 2017**

Pancreas quality/ damage	Recipient report	Retrieval report		Total	% discrepant
		Yes	No		
Pancreas fatty	Yes	14 (8%)	10 (6%)	24	
	No	8 (4%)	147 (82%)	155	
	<b>Total reported</b>			<b>179</b>	<b>10%</b>
Pancreatic capsule damage	Yes	3 (2%)	13 (7%)	16	
	No	4 (2%)	161 (89%)	165	
	<b>Total reported</b>			<b>181</b>	<b>9%</b>
Hepatic artery from SMA	Yes	8 (5%)	3 (2%)	11	
	No	15 (8%)	151 (85%)	166	
	<b>Total reported</b>			<b>177</b>	<b>10%</b>
Parenchymal damage	Yes	1 (1%)	5 (3%)	6	
	No	1 (1%)	173 (96%)	174	
	<b>Total reported</b>			<b>180</b>	<b>3%</b>
Damage to arterial supply	Yes	0 (0%)	4 (2%)	4	
	No	1 (1%)	179 (97%)	180	
	<b>Total reported</b>			<b>184</b>	<b>3%</b>
Pancreatic inflammation	Yes	0 (0%)	2 (1%)	2	
	No	1 (1%)	175 (98%)	176	
	<b>Total reported</b>			<b>178</b>	<b>2%</b>
Pancreatic oedema	Yes	0 (0%)	2 (1%)	2	
	No	1 (1%)	177 (98%)	178	
	<b>Total reported</b>			<b>180</b>	<b>2%</b>
Haematomas	Yes	3 (2%)	11 (6%)	14	
	No	5 (3%)	166 (90%)	171	
	<b>Total reported</b>			<b>185</b>	<b>9%</b>
Other damage	Yes	4 (5%)	11 (13%)	15	
	No	4 (5%)	64 (77%)	68	
	<b>Total reported</b>			<b>83</b>	<b>18%</b>

## Appendix I

Pancreas damage reported by recipient centre for organs accepted and not used in Table 1a and organs transplanted in Table 1b.

Pancreas quality/damage	Answer reported								Total
	Yes		No		Unknown		Not reported		
	N	%	N	%	N	%	N	%	
Pancreas fatty	13	25	13	25	4	8	23	43	53
Pancreatic capsule damage	6	11	22	42	3	6	22	42	53
Damage to arterial supply	3	6	25	47	3	6	22	42	53
Haematomas	3	6	25	47	3	6	22	42	53
Hepatic artery from SMA	3	6	24	45	4	8	22	42	53
Parenchymal damage	3	6	24	45	3	6	23	43	53
Pancreatic inflammation	0	0	26	49	3	6	24	45	53
Pancreatic oedema	0	0	28	53	3	6	22	42	53
Other damage	9	17	6	11	3	6	35	66	53

The length of the portal vein was reported in 27 (51%) of the 53 cases. The median length was 10mm with IR between 10mm to 20mm.

Pancreas quality/damage	Answer reported								Total
	Yes		No		Unknown		Not reported		
	N	%	N	%	N	%	N	%	
Pancreatic capsule damage	13	8	148	91	0	0	2	1	163
Pancreas fatty	12	7	147	90	0	0	4	2	163
Haematomas	11	7	150	92	0	0	2	1	163
Hepatic artery from SMA	9	6	146	90	6	4	2	1	163
Parenchymal damage	4	2	157	96	0	0	2	1	163
Pancreatic inflammation	2	1	156	96	2	1	3	2	163
Pancreatic oedema	2	1	158	97	0	0	3	2	163
Damage to arterial supply	1	1	159	98	0	0	3	2	163
Other damage	11	7	96	59	13	8	43	26	163

The length of the portal vein was reported in 134 (82%) of cases, from the 163. The median length was 12mm with IR between 10mm to 20mm.

## Appendix II

Table 2a shows a comparison of damage reported at retrieval and by recipient centre for 53 organs accepted but not used.

Pancreas quality/ damage	Recipient report		Retrieval report		Total	% discrepant
	Yes	No	Yes	No		
Pancreas fatty	Yes	10 (40%)	3 (12%)		13	
	No	1 (4%)	11 (44%)		12	
	<b>Total reported</b>				<b>25</b>	<b>16%</b>
Pancreatic capsule damage	Yes	0 (0%)	4 (16%)		4	
	No	0 (0%)	21 (84%)		21	
	<b>Total reported</b>				<b>25</b>	<b>16%</b>
Hepatic artery from SMA	Yes	2 (8%)	1 (4%)		3	
	No	0 (0%)	23 (88%)		23	
	<b>Total reported</b>				<b>26</b>	<b>4%</b>
Parenchymal damage	Yes	0 (0%)	3 (12%)		3	
	No	0 (0%)	22 (88%)		22	
	<b>Total reported</b>				<b>25</b>	<b>12%</b>
Damage to arterial supply	Yes	0 (0%)	3 (11%)		3	
	No	0 (0%)	24 (89%)		24	
	<b>Total reported</b>				<b>27</b>	<b>11%</b>
Pancreatic inflammation	Yes	0 (0%)	0 (0%)		0	
	No	0 (0%)	25 (100%)		25	
	<b>Total reported</b>				<b>25</b>	<b>0%</b>
Pancreatic oedema	Yes	0 (0%)	0 (0%)		0	
	No	0 (0%)	27 (100%)		27	
	<b>Total reported</b>				<b>27</b>	<b>0%</b>
Haematomas	Yes	0 (0%)	3 (11%)		3	
	No	0 (0%)	24 (89%)		24	
	<b>Total reported</b>				<b>27</b>	<b>11%</b>
Other damage	Yes	2 (22%)	4 (44%)		6	
	No	0 (0%)	3 (33%)		3	
	<b>Total reported</b>				<b>9</b>	<b>44%</b>

Table 2b shows a comparison of damage reported at retrieval and by recipient centre for 161 organs accepted but not used.

Pancreas quality/ damage	Recipient report	Retrieval report		Total	% discrepant
		Yes	No		
Pancreas fatty	Yes	4 (3%)	7 (5%)	11	
	No	7 (5%)	136 (88%)	143	
	<b>Total reported</b>			<b>154</b>	<b>9%</b>
Pancreatic capsule damage	Yes	3 (2%)	9 (6%)	12	
	No	4 (3%)	140 (90%)	144	
	<b>Total reported</b>			<b>156</b>	<b>8%</b>
Hepatic artery from SMA	Yes	6 (4%)	2 (1%)	8	
	No	15 (10%)	128 (85%)	143	
	<b>Total reported</b>			<b>151</b>	<b>11%</b>
Parenchymal damage	Yes	1 (1%)	2 (1%)	3	
	No	1 (1%)	151 (97%)	152	
	<b>Total reported</b>			<b>155</b>	<b>2%</b>
Damage to arterial supply	Yes	0 (0%)	1 (1%)	1	
	No	1 (1%)	155 (99%)	156	
	<b>Total reported</b>			<b>157</b>	<b>1%</b>
Pancreatic inflammation	Yes	0 (0%)	2 (1%)	2	
	No	1 (1%)	150 (98%)	151	
	<b>Total reported</b>			<b>153</b>	<b>2%</b>
Pancreatic oedema	Yes	0 (0%)	2 (1%)	2	
	No	1 (1%)	150 (98%)	151	
	<b>Total reported</b>			<b>153</b>	<b>2%</b>
Haematomas	Yes	3 (2%)	8 (5%)	11	
	No	5 (3%)	142 (90%)	147	
	<b>Total reported</b>			<b>158</b>	<b>8%</b>
Other damage	Yes	2 (3%)	7 (9%)	9	
	No	4 (5%)	61 (82%)	65	
	<b>Total reported</b>			<b>74</b>	<b>15%</b>