

## NHS BLOOD AND TRANSPLANT

### PANCREAS ADVISORY GROUP

#### ISOLATION STATISTICS

#### SUMMARY

#### INTRODUCTION

- 1 This paper provides information on the outcome of pancreases retrieved with the intention to transplant as pancreas islets as reported to the UK Transplant Registry. The information includes outcomes by islet isolation facility overall and by category of donor quality.

#### DATA

- 2 Data on 162 donors between 1 January 2022 and 31 December 2024, 56 of which were in the latest calendar year, whose pancreas was taken and accepted for islet transplantation were analysed from the UK Transplant Registry (UKTR). A quarterly report of missing data is issued to each isolation facility to ensure data reported are as complete as possible. These data should be reported comprehensively on page 5 of the Deceased Donor Pancreas Information (DDPI) form. Where a form had not been received, data were sourced from Hub Operations notes and islet transplant data to ensure data were as accurately reported as possible.
- 3 Information was available for 162 (100%) donors in the whole time period and 56 (100%) donors in 2024.

#### RESULTS

- 4 In the latest calendar year, of the 56 pancreas donors analysed, 56 were indicated to have been used for isolation and 48 (86%) had isolation completed. Of these 48 completed isolations, 29 met the release criteria and 16 (55%) of those resulted in transplantation. The overall conversion rate from isolation started to islets transplanted is 30%. At each isolation facility, for this time period, the overall conversion rates were 44% at King's, 31% at Edinburgh, and 24% at Oxford.
- 5 Of the 162 isolations commenced in the whole time period, 87 (54%) met the release criteria and 55 (34%) were eventually transplanted. All isolation facilities' met release criteria rates and conversion to transplant rates were consistent with the national rate.
- 6 Of the 56 pancreas donors, three (5%) were categorised as Grade A donors and had isolation started and all (100%) were subsequently transplanted.
- 7 For pancreas donors who had the relevant information reported, the transplant conversion rates of those where isolation was started were 31%, 41% and 30% in 2022, 2023 and 2024, respectively.

#### ACTION

- 8 Isolation facilities are asked to ensure that the islet page of the DDPI form is completed fully including the time part of any date field and returned immediately to ODT Hub Information Services ([NHSBT.odthtaforms@nhs.net](mailto:NHSBT.odthtaforms@nhs.net)). Please include the donor id and "islet page 5" in the subject of the email. A quarterly report is issued to capture missing data from forms returned and outstanding forms.

**Lewis Simmonds**  
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**April 2025**



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#### ISOLATION STATISTICS

#### INTRODUCTION

- 9 This paper provides information on the outcome of pancreases retrieved with the intention to transplant as pancreas islets as reported to the UK Transplant Registry. The information includes outcomes by islet isolation facility overall and by category of donor quality.

#### DATA

- 10 Data on 162 donors between 1 January 2022 and 31 December 2024, 56 of which were in the latest calendar year, whose pancreas was taken and accepted for islet transplantation were analysed from the UK Transplant Registry (UKTR). Information from the islet isolation page of the Deceased Donor Pancreas Information (DDPI) form was used to identify those pancreases arriving at an isolation facility and whether the pancreas was isolated and subsequently transplanted. Where a form had not been received, information has been sourced from Hub Operations notes and islet transplant data to ensure data were as accurately reported as possible.
- 11 Information was available for 162 (100%) donors in the whole time period and for 56 (100%) in 2024.
- 12 After isolation was completed the islets were deemed to be suitable for transplantation or 'met the release criteria' if islet yield  $\geq 200,000$ , viability  $\geq 70\%$  and purity  $\geq 50\%$ . Viability and purity include 70% and 50%, respectively, because it is not possible to report to one decimal place and it was found that in some cases although exactly 70% viability or 50% purity had been reported, these could have been slightly over and therefore met the criteria. If the final product information was available for yield, viability and purity then this was used to determine the release criteria, otherwise post isolation outcomes were used.

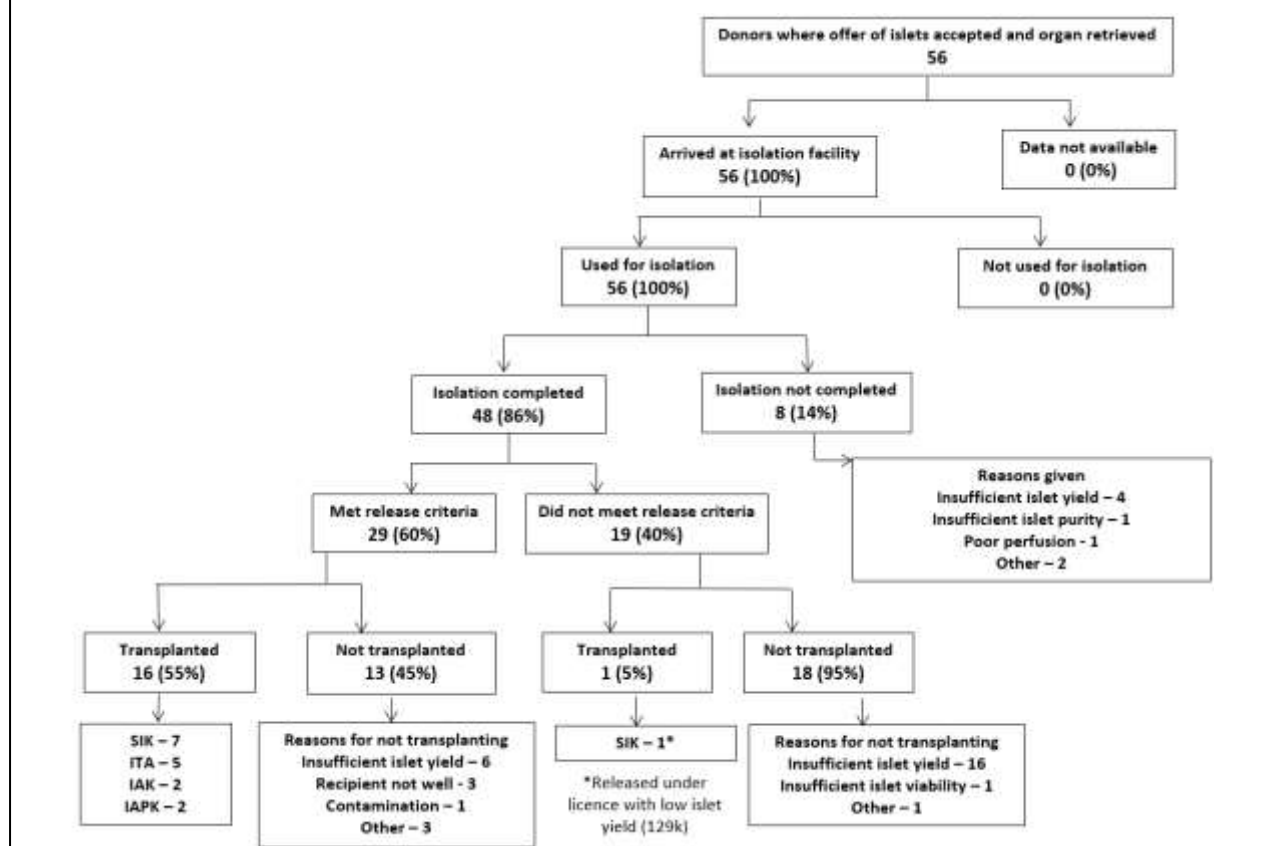
#### RESULTS

- 13 **Figure 1** shows the outcome for the 56 donors between 1 January 2024 and 31 December 2024 where the pancreas was accepted and retrieved with the intention to transplant as islets. Overall, of the 56 indicated to have isolation started, 17 were transplanted giving a conversion rate of 30%. Of the 31 not transplanted, the main reason given was insufficient islet yield for the patient (68%).
- 14 There were 44 isolations started from DBD donors, of which 15 (34%) were transplanted. This was higher than the conversion rate from the 12 DCD donor isolations, 2 of which were transplanted (17%).



- 15 There was one SIK transplant from an isolation that did not meet the release criteria but was released under licence due to low islet yield of 129,000.
- 16 The 'other' reasons given for isolation not being completed in two cases were: "islets trapped processing stopped" (1) and "purification failed" (1). The 'other' reasons given when the prep met release criteria but was not transplanted in three cases were: "poor islet morphology" (1), "cell clamping observed" (1) and "unknown" (1).

**Figure 1 Outcome of pancreas donors where organ was retrieved with the intention to transplant as islets, 1 January 2024 – 31 December 2024**



- 17 In Appendix I, the same information as **Figure 1** is shown separately for those donors who were first offered for islet patients (Figure I) and those first offered for whole pancreas patients (Figure II).
- 18 There were 162 donors whose pancreas was taken and accepted for islet transplantation in the last three calendar years, 162 were indicated to have arrived at an isolation facility using information available. **Table 1** shows information on these 162, by calendar year and isolation facility as reported on the islet page of the DDPI form. In 2022, the conversion rate from isolation started to transplanted ranged from 13% to 46% across the isolation facilities, and in the latest calendar year it ranged from 24% to 44%.

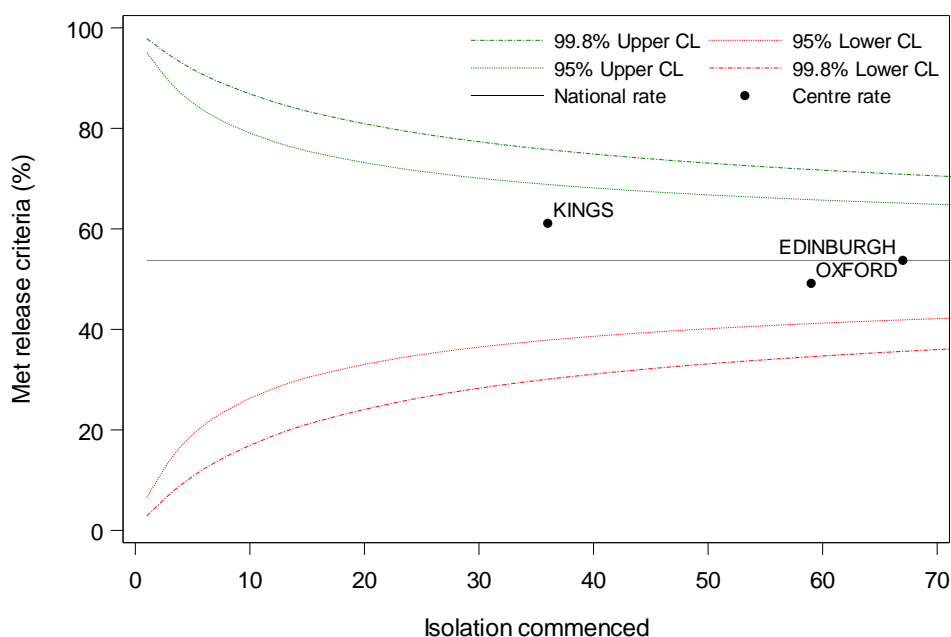


**Table 1** Isolation data by isolation facility, 1 January 2022 – 31 December 2024

Islet isolation facility	Arrived at facility		Isolation started		Isolation completed		Met release criteria (% of isolation started)		Met release criteria & transplanted		Transplanted overall (% of isolation started)	
	N		N	%	N	%	N	%	N	%	N	%
<b>2022</b>												
EDINBURGH	22		22	100	21	96	13	59	10	77	10	46
KINGS	16		16	100	12	75	8	50	2	25	2	13
OXFORD	17		17	100	14	82	10	59	5	50	5	29
<b>TOTAL</b>	<b>55</b>		<b>55</b>	<b>100</b>	<b>47</b>	<b>86</b>	<b>31</b>	<b>56</b>	<b>17</b>	<b>55</b>	<b>17</b>	<b>31</b>
<b>2023</b>												
EDINBURGH	19		19	100	19	100	9	47	4	44	8	42
KINGS	11		11	100	11	100	8	73	8	100	8	73
OXFORD	21		21	100	16	76	10	48	5	50	5	24
<b>TOTAL</b>	<b>51</b>		<b>51</b>	<b>100</b>	<b>46</b>	<b>90</b>	<b>27</b>	<b>53</b>	<b>17</b>	<b>63</b>	<b>21*</b>	<b>41</b>
<b>2024</b>												
EDINBURGH	26		26	100	26	100	14	54	7	50	8	31
KINGS	9		9	100	8	89	6	67	4	67	4	44
OXFORD	21		21	100	14	67	9	43	5	56	5	24
<b>TOTAL</b>	<b>56</b>		<b>56</b>	<b>100</b>	<b>48</b>	<b>86</b>	<b>29</b>	<b>52</b>	<b>16</b>	<b>55</b>	<b>17*</b>	<b>30</b>

\* includes isolations that did not meet release criteria which were released under licence (SIK transplants or low islet purity)

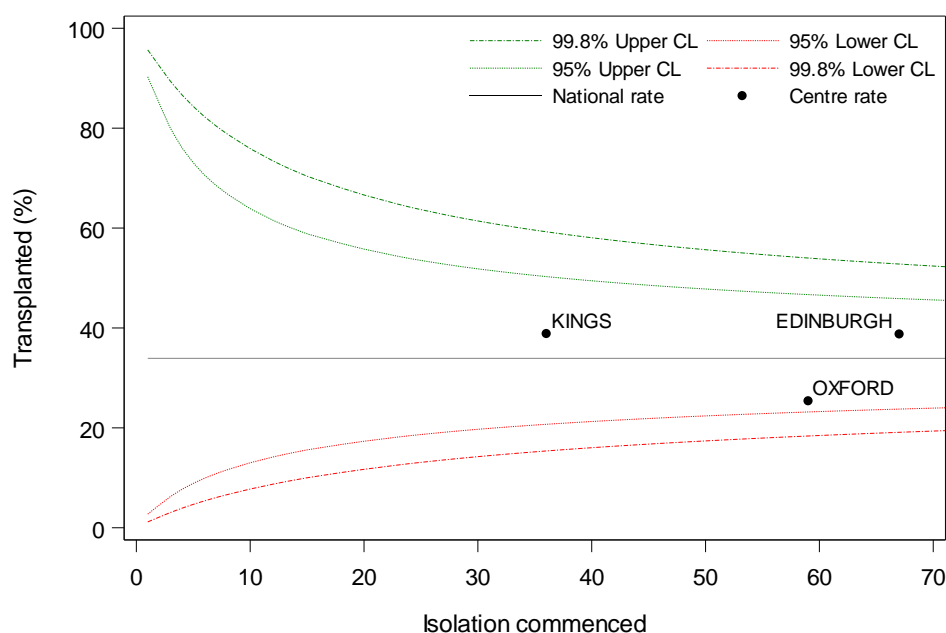
- 19 Of the 162 isolations commenced in the period, 87 (54%) met the release criteria. **Figure 2** shows the rate of isolations commenced that met the release criteria, by isolation facility. All isolation facilities' rates were within the 95% confidence interval of the national rate and hence each have met release criteria rates that are consistent with the national rate.

**Figure 2: Rates of commenced isolations that met release criteria, 1 January 2022 – 31 December 2024**



- 20 Of the 162 isolations commenced in the period, 55 (34%) were eventually transplanted. **Figure 3** shows the rate of isolations commenced that were eventually transplanted, by isolation facility. All isolation facilities' rates were within the 95% confidence interval of the national rate and hence each have conversion rates that are consistent with the national rate.

**Figure 3: Rates of commenced isolations that were eventually transplanted, 1 January 2022 – 31 December 2024**



- 21 **Table 2** shows the information for 2024 split into Grade A donors and Non-Grade A donors. Definition of Grade A donors can be found in the Appendix II. If cold ischaemic time could not be calculated or other relevant information was missing, then donors are categorised as non-Grade A.
- 22 **Table 2** shows that there were three (5%) donors identified as Grade A compared to 53 (95%) non-Grade A donors. Two of the donors at Oxford and one at Kings were identified as Grade A and none at Edinburgh. Of those three Grade A donors where isolation started, all (100%) were transplanted.



**Table 2** Isolation data by isolation facility by grade of donor, 1 January 2024 – 31 December 2024

Islet isolation facility	Arrived at facility		Isolation started		Isolation completed		Met release criteria (% of isolation started)		Met release criteria & transplanted		Transplanted overall (% of isolation started)	
	N		N	%	N	%	N	%	N	%	N	%
<b>GRADE A</b>												
EDINBURGH	0		0	-	0	-	0	-	0	-	0	-
KINGS	1		1	100	1	100	1	100	1	100	1	100
OXFORD	2		2	100	2	100	2	100	2	100	2	100
<b>TOTAL</b>	<b>3</b>		<b>3</b>	<b>100</b>	<b>3</b>	<b>100</b>	<b>3</b>	<b>100</b>	<b>3</b>	<b>100</b>	<b>3</b>	<b>100</b>
<b>NON-GRADE A</b>												
EDINBURGH	26		26	100	26	100	14	54	7	50	8	31
KINGS	8		8	100	7	88	5	63	3	60	3	38
OXFORD	19		19	100	12	63	7	37	3	43	3	16
<b>TOTAL</b>	<b>53</b>		<b>53</b>	<b>100</b>	<b>45</b>	<b>85</b>	<b>26</b>	<b>49</b>	<b>13</b>	<b>50</b>	<b>14</b>	<b>26</b>

- 23 Of those 56 donors in 2024 whose pancreas was used for isolation and information was available, 43 (77%) were aged 50 years or younger and 13 (23%) were aged over 50 years. Of the 16 donors aged over 50 years with isolation started, all had isolation completed, 9 (56%) met the release criteria and five were transplanted. This gives an overall conversion rate of those where isolation commenced of 31% (five out of 16). This is similar to the rate of 28% (12 of 43 donors) for donors aged 50 years or younger.

## ACTION

- 24 Isolation facilities are asked to ensure that the islet page of the DDPI form is completed fully, including the time part of any date field, and returned immediately to ODT Hub Information Services ([NHSBT.odthtaforms@nhs.net](mailto:NHSBT.odthtaforms@nhs.net)). Please include the donor id and "islet page 5" in the subject of the email. A quarterly report is issued to capture missing data from forms returned and outstanding forms.

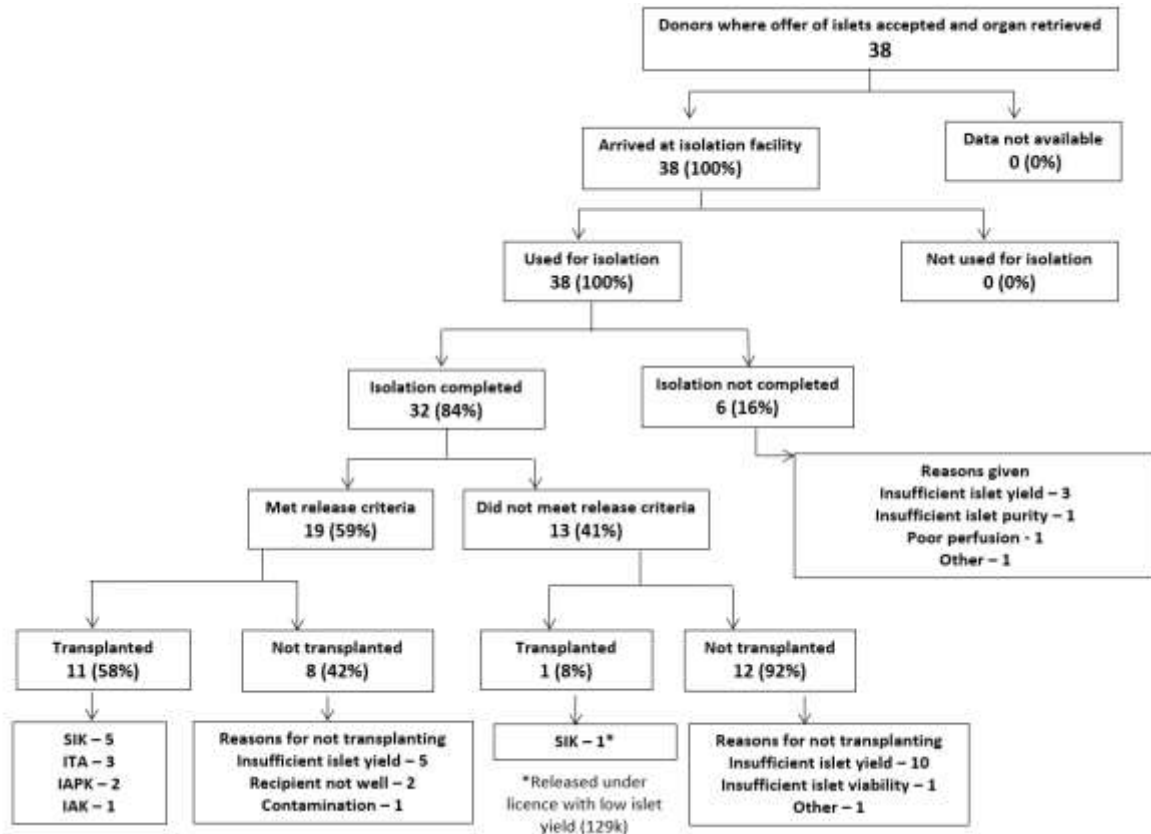
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**April 2025**



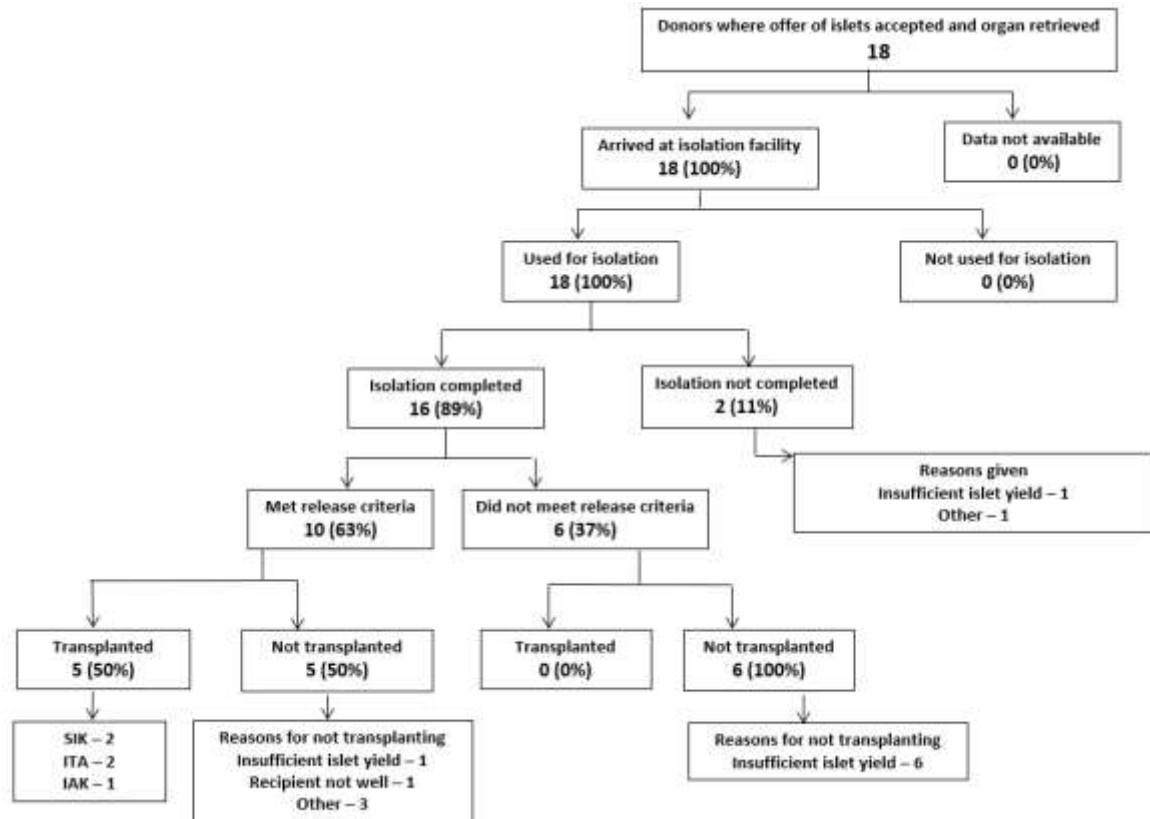
## Appendix I

**Figure I Outcome of pancreas donors where organ was retrieved with the intention to transplant as islets and donor was offered to an islet patient first, 1 January 2024 – 31 December 2024**





**Figure II Outcome of pancreas donors where organ was retrieved with the intention to transplant as islets and donor was offered to a whole pancreas patient first, 1 January 2024 – 31 December 2024**





## Appendix II

Grade A donors are donors who met all the following criteria:

- DBD
- Aged 40 to 60 years inclusive
- BMI 26.0 to 35.4 inclusive
- CIT <8 hours (time from perfusion commenced to isolation start time)
- No bench perfusion
- No pancreatic inflammation
- No pancreatic odema
- No parenchymal damage
- No haematomas
- No capsule damage
- No out of hospital cardiac arrest