

## NHS BLOOD AND TRANSPLANT

## PANCREAS ADVISORY GROUP

## PANCREASES FOR ISLET TRANSPLANTATION

## INTRODUCTION

- 1 This paper summarises the use of pancreases for islet isolation and transplantation following an action from the November 2021 PAG meeting. Since the start of the revised Pancreas Offering Scheme on 11 September 2019 donors aged <25 years with a BMI <25 are not initially offered to patients waiting for an islet transplant. Donors aged under 25 years with a BMI  $\geq$ 25 and donors aged 25 years or more with a BMI <25 can be offered to patients waiting for an islet transplant. All patients on the pancreas matching run are prioritised by scheme tier and total points score.

## DATA

- 2 Pancreas donors between the start of the new scheme 11 September 2019 and 31 December 2021 with a BMI <30.5 were investigated to find the proportion taken for islet isolation and the number subsequently transplanted. The BMI cut-off of 30.5 was used because donors with a BMI  $\geq$ 30.5 are not initially offered to patients waiting for a whole pancreas transplant. The donors were split into two age groups <25 years and  $\geq$ 25 years.

## SUMMARY

- 3 **Table 1** shows that of the 39 pancreas donors aged under 25 years with a BMI greater than or equal to 24.5 and less than 30.5, eight (20.5%) were taken for islets and four (50%) of these were transplanted. These eight pancreases taken for islets account for just 5% of the 160 donors aged under 25 years with a BMI of less than 30.5.
- 4 Of those 492 pancreas donors aged 25 years or over with a BMI of less than 30.5, 87 (17.7%) were taken for islets and 27 (31%) resulted in transplantation.
- 5 **Table 2** shows the use of pancreases for whole pancreas transplantation in the two age groups grouped by BMI. Of the 160 pancreas donors aged under 25 years with a BMI less than 30.5, 152 (95.0%) were taken for whole organ and 81.6% of these were transplanted. Of the 492 pancreas donors aged over 25 years with a BMI less than 30.5, 405 (81.8%) were taken for whole organ and 54.3% of these were transplanted.

**Table 1 Deceased (DBD and DCD) pancreas donors. 11 September 2019 – 31 December 2021 by age and BMI group where BMI<30.5**

Cohort of donors	Age<25 years			Age≥25 years		
	BMI<24.5	24.5≤BMI<30.5	BMI<30.5 (Total) N (%)	BMI<24.5	24.5≤BMI<30.5	BMI<30.5 (Total) N (%)
Pancreas donors	121 N (%)	39 N (%)	<b>160</b> <b>N (%)</b>	217 N (%)	275 N (%)	<b>492</b> <b>N (%)</b>
Taken for islets (% of donors)	0 (0.0%)	8 (20.5%)	<b>8 (5.0%)</b>	21 (9.7%)	66 (24.0%)	<b>87 (17.7%)</b>
Criteria data present <sup>1</sup> (% of those taken for islets)	0 (0.0%)	8 (100.0%)	<b>8 (100.0%)</b>	12 (57.1%)	46 (69.7%)	<b>58 (66.7%)</b>
Met criteria <sup>2</sup> (% of those with data present)	0 (0.0%)	3 (37.5%)	<b>3 (37.5%)</b>	6 (50.0%)	26 (56.2%)	<b>32 (55.2%)</b>
Met criteria and transplanted (% of those met criteria)	0 (0.0%)	2 (66.7%)	<b>2 (66.7%)</b>	3 (50.0%)	15 (57.7%)	<b>18 (56.3%)</b>
Total transplanted (% of those taken for islets)	0 (0.0%)	4 (50.0%)	<b>4 (50.0%)</b>	7 (33.3%)	20 (30.3%)	<b>27 (31.0%)</b>

<sup>1</sup> Some forms not returned yet

<sup>2</sup>Met criteria if islet yield≥200,000; purity≥50%; viability≥70%

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Pancreas donors	121 N (%)	39 N (%)	<b>160</b> <b>N (%)</b>	217 N (%)	275 N (%)	<b>492</b> <b>N (%)</b>
Whole organ taken (% of donors)	121 (100.0%)	31 (79.5%)	<b>152 (95.0%)</b>	196 (90.3%)	209 (76.0%)	<b>405 (81.8%)</b>
Total transplanted (% of those taken)	101 (83.5%)	23 (74.2%)	<b>124 (81.6%)</b>	117 (59.7%)	103 (49.3%)	<b>220 (54.3%)</b>