

APPENDIX 4: Main Study Findings

First Author, Publication Year	Main Study Findings																				
Wade <sup>10</sup> 2013	<p><b>DCD (n = 64) vs DBD (n = 248)</b> adjusted analysis (covariates not specified)</p> <p>Delayed graft function RR 1.66; 95% CI, 1.02 to 2.71; <i>P</i> = 0.041</p> <p>Biopsy proven rejection RR 1.32; 95% CI, 0.71 to 2.45; <i>P</i> = 0.39</p> <p>Death-censored graft loss or two consecutive iGFRs&lt;50 RR 1.16; 95% CI, 0.68 to 1.97; <i>P</i> = 0.59</p> <p>Graft loss or death RR 1.09; 95% CI, 0.58 to 2.06; <i>P</i> = 0.79</p> <p>Death RR 0.97; 95% CI, 0.41 to 2.27; <i>P</i> = 0.94</p>																				
Nagaraja <sup>6</sup> 2012	<p><b>All recipients [DCD (n = 80) vs DBD (n = 226)]</b> (unadjusted analysis)</p> <p>Delayed graft function 73% vs 27%; <i>P</i> &lt;0.001 Primary non-function 1 (1.3%) vs, 5 (2.2%), <i>p</i>=0.6</p> <p>Biopsy proven acute rejection 9% vs 23%; <i>P</i> &lt;0.001</p> <p>1 year/4 year graft survival 94% vs 90% / 79% vs 82% <i>P</i> = 0.44</p> <p>4 year death-censored graft survival 95% vs 91%; <i>P</i> = 0.26</p> <p>Patient survival No significant difference between groups, <i>P</i> = 0.9</p>																				
Bellingham <sup>11</sup> 2011	<p><b>DCD (n = 965) vs DBD (n = 2674)</b> (unadjusted analysis)</p> <p>delayed graft function 35.7% vs 20.3%; <i>P</i> ≤ 0.0001</p> <table border="1"> <thead> <tr> <th>Era</th> <th colspan="2">1980-1992</th> <th colspan="2">1993-2008</th> </tr> <tr> <th></th> <th>DCD</th> <th>DBD</th> <th>DCD</th> <th>DBD</th> </tr> </thead> <tbody> <tr> <td><b>Delayed graft function (%)</b></td> <td>30</td> <td>16</td> <td>45</td> <td>22</td> </tr> <tr> <td><b>Free of acute cellular rejection (%)*</b></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Era	1980-1992		1993-2008			DCD	DBD	DCD	DBD	<b>Delayed graft function (%)</b>	30	16	45	22	<b>Free of acute cellular rejection (%)*</b>				
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	1 year	33	50	70	66
	3 year	30	46	67	61
	10 year	26	41	58	55
	P value	≤0.001		0.07	
	<b>Graft survival (%)</b>				
	1 year	72	83	87	89
	3 year	63	74	77	78
	10 year	38	40	47	46
	P value	0.04		0.47	
	<b>Patient survival (%)</b>				
	1 year	92	95	93	95
	3 year	84	89	86	88
	10 year	60	57	57	63
	P value	0.58		0.06	
	*Rejection was biopsy proven				
Pine <sup>7</sup> 2010	<p><b>DCD (n = 103) vs DBD (n = 183)</b> (unadjusted analysis: patients matched on recipient and donor age, sex, and BMI; HLA mismatches; ischemia time; immunosuppressive regimen)</p> <p>Delayed graft function 58% vs 28%, <i>P</i> = 0.03</p> <p>Primary non-function 4% vs 1%, <i>P</i> = 0.04</p> <p>Biopsy proven acute rejection 12% vs 16%, <i>P</i> = NS</p> <p>1 year/3 year graft survival 97% vs 96% / 85% vs 86%, <i>P</i> = 0.30</p> <p>1 year / 3 year recipient survival 98% vs 97% / 92% vs 95%, <i>P</i> = 0.12</p>				
Singh <sup>12</sup> 2011	<p><b>DCD (n = 70) vs DBD (n = 508)</b> (unadjusted analysis)</p> <p>Delayed graft function 40 (57%) vs 109 (21%); <i>P</i> = 0.0001</p> <p>Biopsy-proven acute rejection 20 (29%) vs 82 (16%); <i>P</i> = 0.018</p> <p>Overall graft survival 54 (77%) vs 402 (79%); NS</p> <p>Death-censored graft loss 10 (15%) vs 68 (13%); NS</p>				

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	<p>Overall patient survival 62 (89%) vs 456 (90%); NS</p>
<p>Snoeijs<sup>3</sup> 2010</p>	<p><b>DCD vs DBD</b> Adjusted analysis (patients matched on transplant type, year and other key characteristics)</p> <p>Delayed graft function (N = 726) OR 10.3; 95% CI, 6.68 to 15.9; <i>P</i> &lt;0.001</p> <p>Primary non function (N = 811) OR 7.51; 95% CI, 4.01 to 14.1; <i>P</i> &lt;0.001</p> <p>Death-censored graft loss at 15 years (N = 851) HR 1.82; 95% CI, 1.37 to 2.42; <i>P</i> &lt;0.001</p> <p>Patient survival at 15 years (N = 857) HR 1.16; 95% CI, 0.87 to 1.54; <i>P</i> = 0.32</p> <p>eGFR at 1 year (N = 646) mean difference -6.2 mL/min; 95% CI, -9.4 to -3.0); <i>P</i> &lt;0.001</p>
<p>Snoeijs<sup>13</sup> 2010</p>	<p><b>DCD (n = 459) vs DBD (n = 680)</b></p> <p>Graft failure in first 3 months (unadjusted) 12.0% vs 6.3%; <i>P</i> = 0.001</p> <p>Mortality rate, % per patient-year (unadjusted) DCD 3.4% vs DBD 3.7% vs dialysis 5.0%, <i>P</i> value not reported</p> <p>Mortality rate (adjusted analysis) Standard criteria DBD vs dialysis treatment HR 0.51; 95% CI, 0.32 to 0.81; <i>P</i> = 0.004</p> <p>Standard criteria DCD vs conventional therapy† HR 0.44; 95% CI, 0.24 to 0.80; <i>P</i> = 0.007</p> <p>Extended criteria* DBD vs conventional therapy† HR 1.12; 95% CI, 0.71 to 1.76; <i>P</i> = 0.62</p> <p>Extended criteria* DCD vs conventional therapy† HR 0.61; 95% CI, 0.31 to 1.19; <i>P</i> = 0.15</p> <p>†conventional therapy defined as dialysis treatment or waiting on dialysis until standard criteria DBD transplantation (follow up continued after receipt of DBD kidney)</p> <p>*extended criteria donors were ≥60 years or between 50 and 60 years</p>

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Summers <sup>8</sup> 2010	<p>with two additional risk factors (elevated creatinine, hypertension or cardiovascular cause of death)</p> <p><b>DCD vs DBD for all transplant recipients</b> (unadjusted)</p> <p>Delayed graft function 332/659 (50%) vs 1386/5474 (25%); <math>P &lt; 0.0001</math></p> <p>Acute rejection in first 3 months 121/723 (17%) vs 1646/6793 (24%); <math>P &lt; 0.0001</math></p> <p><b>DCD (n = 739) vs DBD (n = 6759) for first transplant recipients</b> Graft failure up to 5 years (adjusted) HR 1.01; 95% CI, 0.83 to 1.19; <math>P = 0.97</math></p>																																								
Barlow <sup>9</sup> 2009	<p><b>NHBD (n = 112) vs HBD (n = 164)</b> (unadjusted analysis; patients matched for cold ischemia time, HLA mismatches, donor age, prior transplant and 2 of 4 minor criteria)</p> <p>Delayed graft function 94 (83.9%) vs 36 (22.0%); <math>P &lt; 0.001</math></p> <p>Primary non-function 6 (5.4%) vs 3 (1.8%); <math>P = 0.164</math></p> <p>Biopsy proven acute rejection 33 (29.5%) vs 63 (38.4%); <math>P = 0.157</math></p> <table border="1"> <thead> <tr> <th></th> <th colspan="2">Death-censored graft survival (%)<sup>*</sup></th> <th colspan="2">Graft and patient survival (%)<sup>†</sup></th> </tr> <tr> <th>Year</th> <th>DCD</th> <th>DBD</th> <th>DCD</th> <th>DBD</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>92</td> <td>91</td> <td>86</td> <td>88</td> </tr> <tr> <td>3</td> <td>82</td> <td>89</td> <td>76</td> <td>82</td> </tr> <tr> <td>5</td> <td>78</td> <td>86</td> <td>69</td> <td>76</td> </tr> <tr> <td>10</td> <td>61</td> <td>72</td> <td>50</td> <td>58</td> </tr> <tr> <td>15</td> <td>44</td> <td>59</td> <td>29</td> <td>44</td> </tr> <tr> <td>P value</td> <td colspan="2">0.052</td> <td colspan="2">0.22</td> </tr> </tbody> </table> <p><sup>*</sup>graft failures are events; <sup>†</sup>graft failure or death are events in these time to event analyses</p> <p>serum creatinine was significantly higher in NHBD recipients at 1 (<math>P = 0.009</math>), 2 (<math>P = 0.009</math>), 11 (<math>P = 0.038</math>), and 12 (<math>P = 0.010</math>) years and not significantly different at all other time points (0.25 to 15 years).</p>		Death-censored graft survival (%) <sup>*</sup>		Graft and patient survival (%) <sup>†</sup>		Year	DCD	DBD	DCD	DBD	1	92	91	86	88	3	82	89	76	82	5	78	86	69	76	10	61	72	50	58	15	44	59	29	44	P value	0.052		0.22	
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DBD = donation after brain death; DCD = donation after cardiocirculatory death; DCGL = death-censored graft loss; DCGS = death-censored graft survival; DGF = delayed graft function; eGFR = estimated glomerular filtration rate; HBD = heart beating donor; HR = hazard ratio; NHBD = non-heart beating donor; NS = not significant; OR = odds ratio