Supplementary Table S1: Reasons for kidney discard in the United States from 2010-2021

Reasons For Kidney Discard	n (%)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Donor Factors	**756(1.7)**	**44(1.7)**	**58(2.2)**	**47(1.7)**	**51(1.9)**	**56(1.9)**	**65(2.1)**	**77(2.1)**	**60(1.7)**	**59(1.6)**	**63(1.4)**	**64(1.3)**	**112(1.7)**
Donor Medical history	354(0.8)	8(0.3)	17(0.6)	15(0.5)	15(0.5)	12(0.4)	31(1)	23(0.6)	39(1.1)	32(0.9)	39(0.9)	43(0.8)	80(1.2)
Donor social history	56(0.1)	2(0.1)	6(0.2)	12(0.4)	7(0.3)	5(0.2)	8(0.3)	11(0.3)	1(0)	0(0)	0(0)	2(0)	2(0)
Positive CMV	1(0.0)	1(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
Positive HIV	8(0.0)	0(0)	2(0.1)	0(0)	0(0)	2(0.1)	2(0.1)	0(0)	0(0)	0(0)	0(0)	0(0)	2(0)
Positive Hepatitis	255(0.6)	24(0.9)	27(1)	15(0.5)	23(0.8)	35(1.2)	17(0.5)	34(0.9)	16(0.5)	21(0.6)	15(0.3)	12(0.2)	16(0.2)
Infection	78(0.2)	9(0.3)	6(0.2)	5(0.2)	6(0.2)	2(0.1)	7(0.2)	9(0.2)	4(0.1)	6(0.2)	9(0.2)	5(0.1)	10(0.2)
Inadequate urine output	4(0.0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	2(0)	2(0)
Procurement Factors	**1343(3.1)**	**116(4.4)**	**102(3.9)**	**119(4.3)**	**96(3.5)**	**86(3)**	**110(3.5)**	**99(2.7)**	**114(3.2)**	**100(2.7)**	**132(2.9)**	**132(2.6)**	**137(2.1)**
Vascular damage	494(1.1)	41(1.6)	42(1.6)	42(1.5)	44(1.6)	33(1.1)	45(1.4)	37(1)	43(1.2)	38(1)	44(1)	48(0.9)	37(0.6)
Ureteral damage	115(0.3)	9(0.3)	5(0.2)	4(0.1)	3(0.1)	9(0.3)	12(0.4)	11(0.3)	11(0.3)	3(0.1)	15(0.3)	11(0.2)	22(0.3)
Organ trauma	497(1.1)	45(1.7)	33(1.2)	44(1.6)	40(1.5)	29(1)	43(1.4)	44(1.2)	41(1.2)	42(1.1)	52(1.2)	50(1)	34(0.5)
WIT too long	237(0.5)	21(0.8)	22(0.8)	29(1)	9(0.3)	15(0.5)	10(0.3)	7(0.2)	19(0.5)	17(0.5)	21(0.5)	23(0.5)	44(0.7)
Organ Factors	**6240(14.2)**	**539(20.4)**	**531(20.1)**	**566(20.4)**	**492(18)**	**431(14.8)**	**479(15.2)**	**500(13.7)**	**523(14.8)**	**514(13.7)**	**548(12.2)**	**547(10.8)**	**570(8.7)**
Organ not as described	113(0.3)	7(0.3)	9(0.3)	4(0.1)	8(0.3)	6(0.2)	11(0.3)	7(0.2)	13(0.4)	7(0.2)	13(0.3)	19(0.4)	9(0.1)
Diseased organ	1098(2.5)	89(3.4)	91(3.4)	99(3.6)	64(2.3)	69(2.4)	87(2.8)	88(2.4)	117(3.3)	102(2.7)	117(2.6)	92(1.8)	83(1.3)
Anatomical abnormalities	2286(5.2)	165(6.2)	186(7)	226(8.2)	179(6.5)	171(5.9)	210(6.6)	199(5.5)	195(5.5)	184(4.9)	179(4)	186(3.7)	206(3.2)
Poor organ function	2743(6.2)	278(10.5)	245(9.3)	237(8.6)	241(8.8)	185(6.4)	171(5.4)	206(5.6)	198(5.6)	221(5.9)	239(5.3)	250(4.9)	272(4.2)
Biopsy findings	**11907(27.1)**	**993(37.6)**	**984(37.2)**	**932(33.7)**	**934(34.1)**	**986(33.9)**	**1028(32.5)**	**1024(28.1)**	**873(24.6)**	**978(26.1)**	**1186(26.3)**	**1029(20.3)**	**960(14.7)**
Transport	**647(1.5)**	**41(1.6)**	**47(1.8)**	**58(2.1)**	**36(1.3)**	**45(1.5)**	**45(1.4)**	**62(1.7)**	**53(1.5)**	**60(1.6)**	**66(1.5)**	**46(0.9)**	**88(1.4)**
CIT too long (HMP)	153(0.3)	12(0.5)	18(0.7)	8(0.3)	4(0.1)	12(0.4)	11(0.3)	14(0.4)	6(0.2)	22(0.6)	17(0.4)	12(0.2)	17(0.3)
CIT too long (SCS)	494(1.1)	29(1.1)	29(1.1)	50(1.8)	32(1.2)	33(1.1)	34(1.1)	48(1.3)	47(1.3)	38(1)	49(1.1)	34(0.7)	71(1.1)
Recipient determined to be unsuitable for Tx in OR	**183(0.4)**	**24(0.9)**	**13(0.5)**	**13(0.5)**	**13(0.5)**	**16(0.6)**	**20(0.6)**	**17(0.5)**	**11(0.3)**	**20(0.5)**	**7(0.2)**	**18(0.4)**	**11(0.2)**
No recipient located - list exhausted	**17094(38.9)**	**488(18.5)**	**446(16.9)**	**604(21.8)**	**695(25.4)**	**837(28.8)**	**946(29.9)**	**1414(38.7)**	**1495(42.2)**	**1571(41.9)**	**2022(44.9)**	**2621(51.6)**	**3955(60.7)**
Other, specify	**5738(13.1)**	**396(15)**	**465(17.6)**	**429(15.5)**	**423(15.4)**	**449(15.5)**	**468(14.8)**	**457(12.5)**	**414(11.7)**	**451(12)**	**479(10.6)**	**623(12.3)**	**684(10.5)**

HIV: human immunodeficiency virus; CMV: Cytomegalovirus; WIT: warm ischemia time; CIT: cold ischemia time; HMP: hypothermic machine perfusion; SCS: static cold storage; Tx: transplantation; OR: operating room

Supplementary Table S2: Donor demographics for each individual kidney preserved using hypothermic machine perfusion (HMP) versus static cold storage (SCS).

Donor Demographics	HMP (n=78263)	SCS (n=132271)
Age mean ± std	42.9 ± 14.7	38.9 ± 16.4
BMI mean ± std	29± 7.3	27.7± 6.9
Terminal SCr (mg/dL) mean ± std	1.4±1.4	1.3±1.2
KDPI Grouped n (%)		
0-20	13897 (17.3)	37512 (27.2)
21-40	15655 (19.8)	27860 (20.1)
41-60	17228 (21.5)	25881 (18.7)
61-80	18356 (22.5)	23543 (17.0)
81-100	15378 (19.3)	23908 (17.2)
Cortex biopsy n (%)	57944 (72.0)	62424 (45.0)
Donor Type n (%)		
SCD	36126 (44.8)	99731(71.8)
ECD	14329 (17.8)	24217 (17.4)
DCD	30160 (37.4)	14957 (10.8)
WIT mean ± std	21.7 (15.9)	21.4 (14.1)

SCr: serum creatinine levels; KDPI: kidney donor profile index; SCD: standard criteria donor; ECD: extended criteria donor; DCD: donation after circulatory death ; WIT: warm ischemia time