



Paired Exchange Results Quarterly Report

As of September 30, 2013

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Message From the Founder

Our third quarter results were strong and put us on track to facilitate 299 transplants for the year which is a 33% increase over the 226 transplants facilitated last year. Our third quarter performance brings us to 838 transplants since we started organizing swaps in 2008.

After investing aggressively in process changes to better screen patient and donor referrals, we are now providing higher quality referrals while continuing to deliver over a thousand referrals to our Member Centers annually. This helps folks who are in need of NKR's paired exchange services and provides growth opportunities for our Member Centers.

In the third quarter, we demonstrated continued success finding matches for the hardest to match patients. As a result, we expect to nearly double the number of patients transplanted this year who have cPRA scores above 80%. Additionally, 21% of our transplanted patients in 2013 had cPRA scores > 95%. This capability to find matches for the most highly sensitized patients has also allowed us to slow the growth of our unmatched pool which is having the direct effect of reducing wait times.

We continued our focus on identifying root causes and corrective actions for swap failures. We improved our conversion rate from match offers to cross matching as a direct result of increased utilization of the donor preselect function. We also witnessed significant improvement in cross match accuracy which was offset by more swap failures caused by donors who were not ready for surgery. Reducing swap failures will continue to be a priority for us as member centers fine tune their internal processes to eliminate preventable swap failures, thereby improving the reliability of our service to patients in need of a transplant.

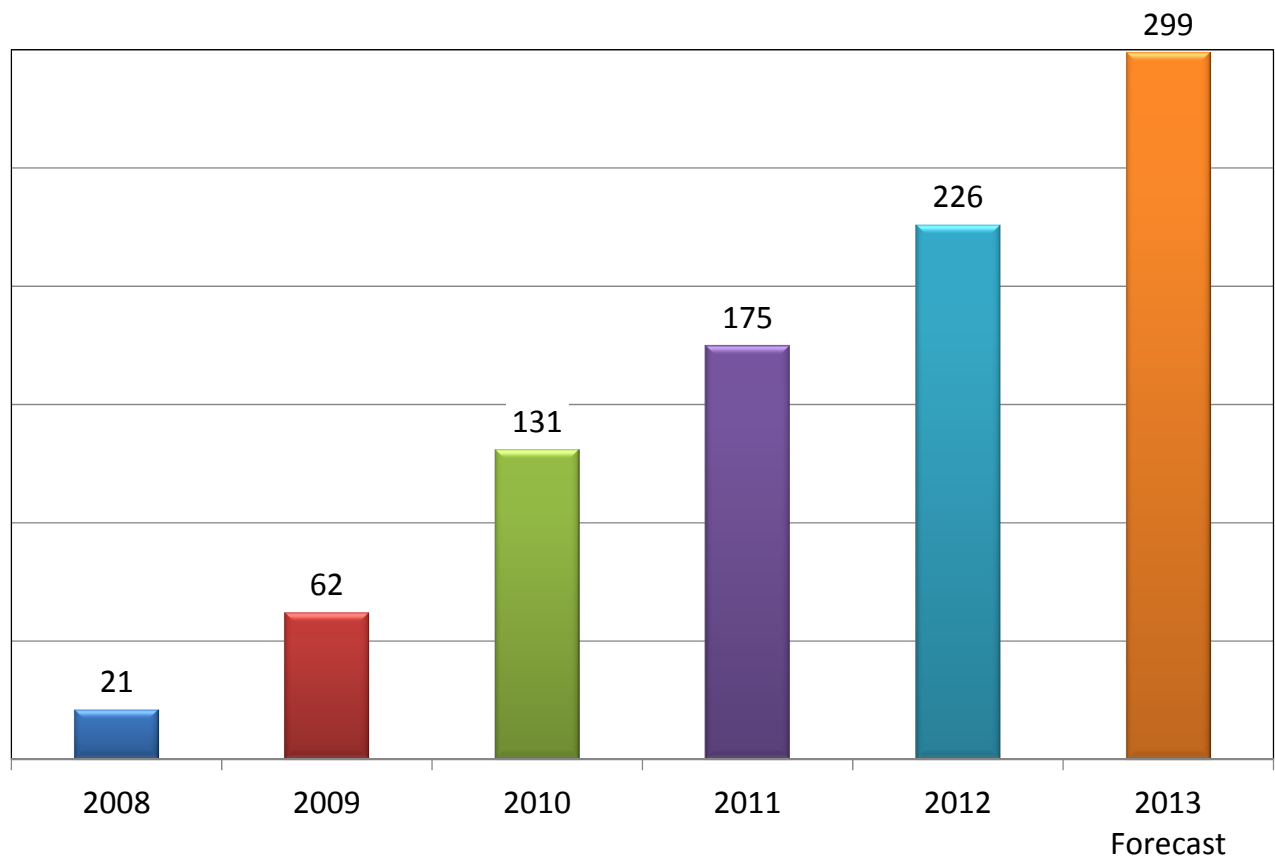
None of this success would be possible without the effort and dedication of the medical professionals at our Member Centers. Thank you - and keep up the great work.

Sincerely

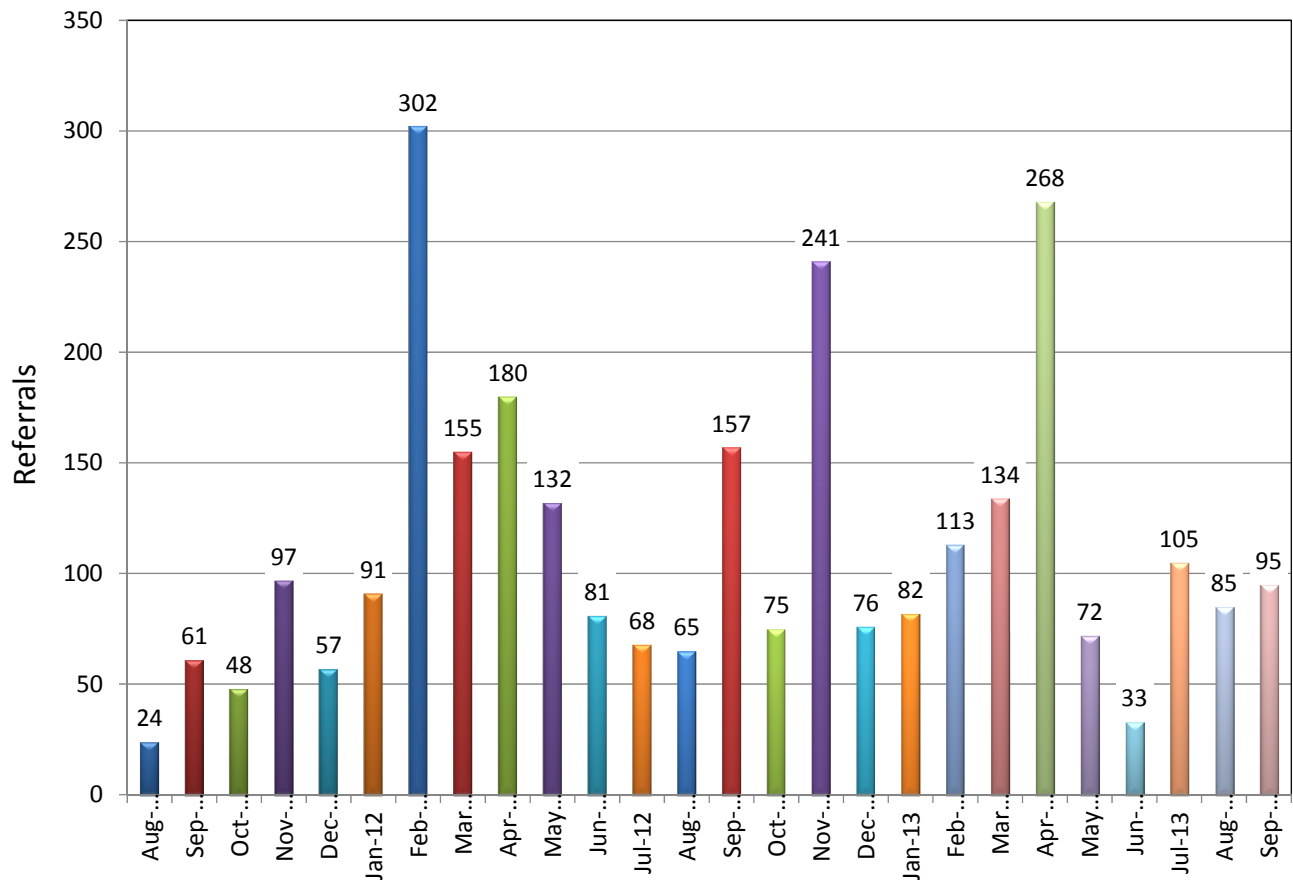
A handwritten signature in blue ink, appearing to read 'G Hil', with a stylized flourish extending from the end.

Garet Hil
Founder & CEO
National Kidney Registry

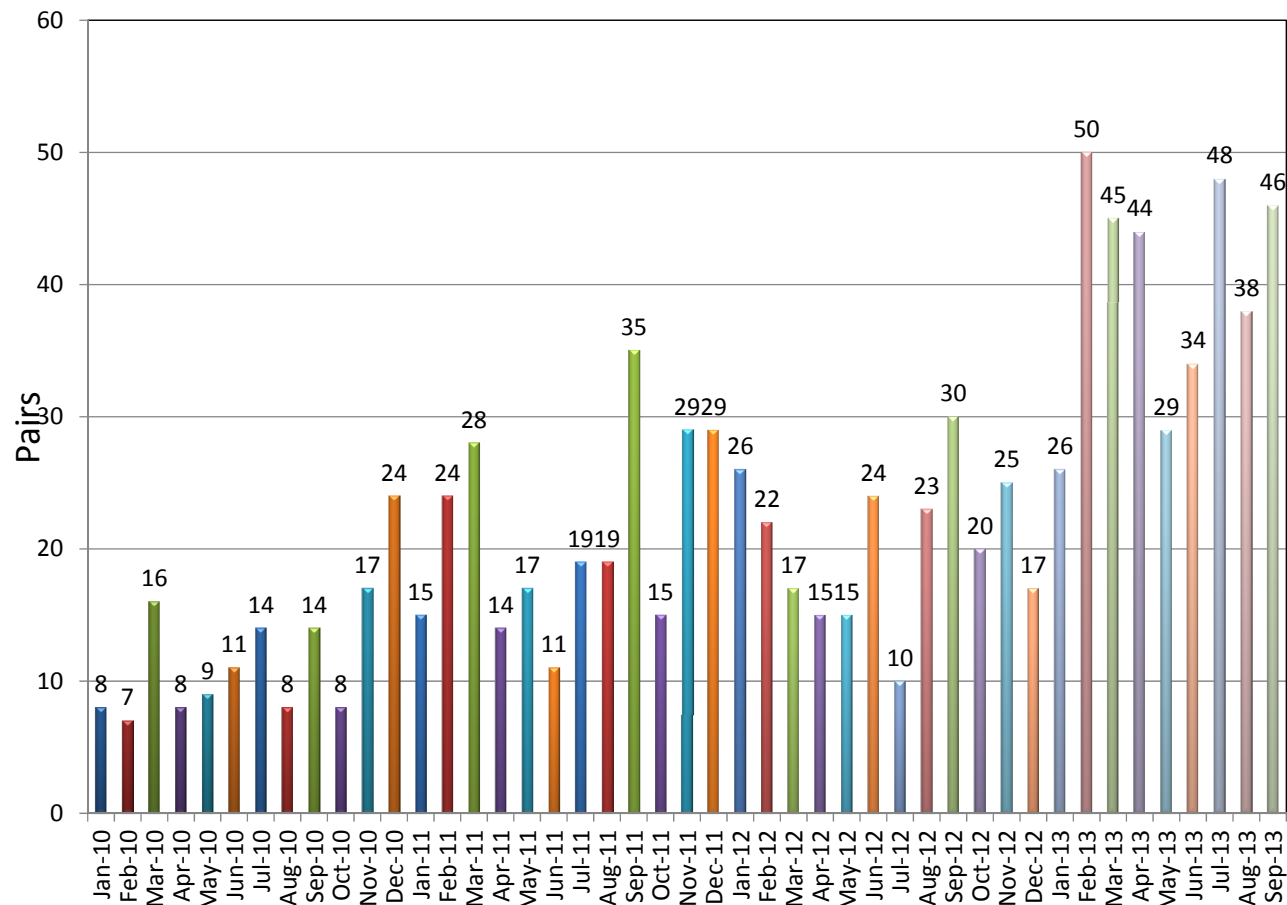
Transplants Facilitated by Year



Patient Referrals to NKR Member Centers

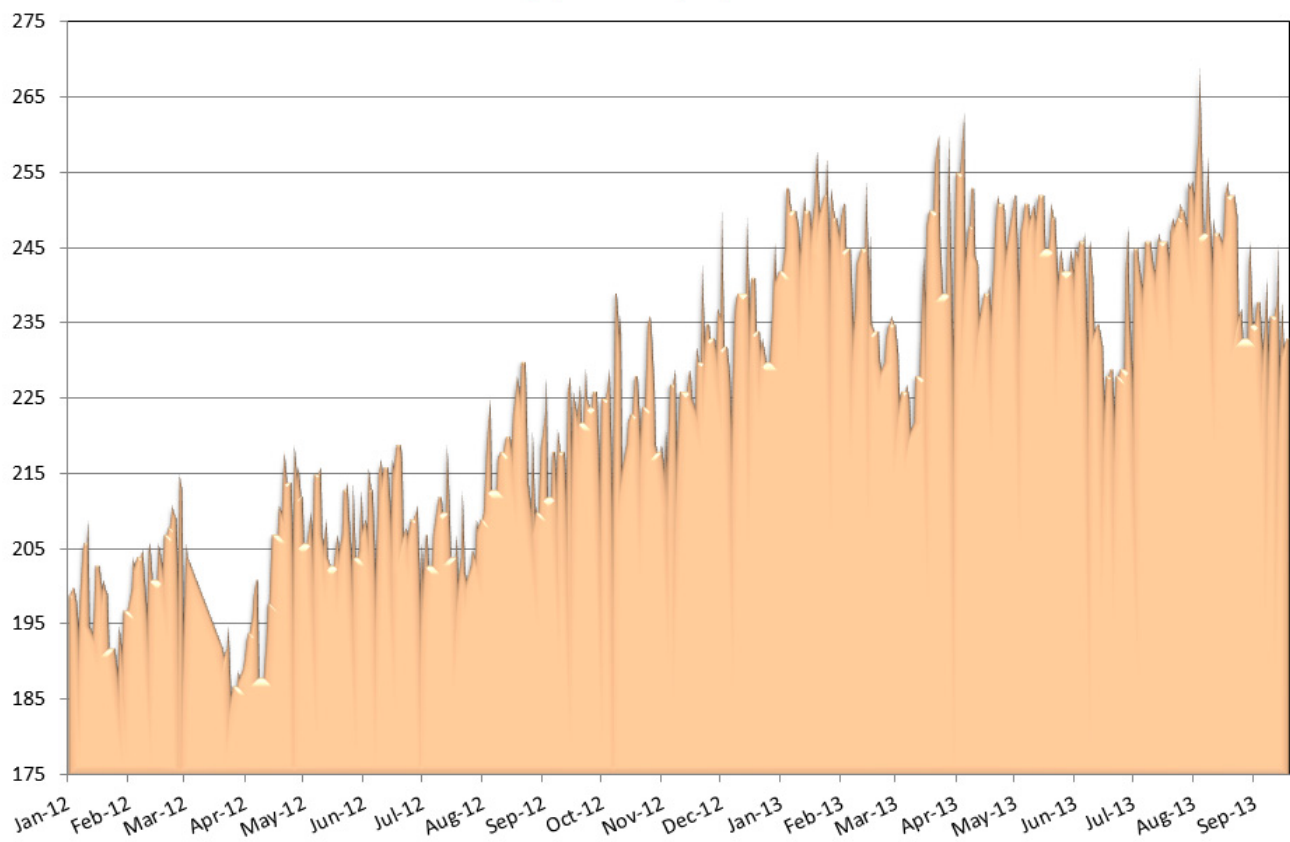


New Pair Enrollments Per Month

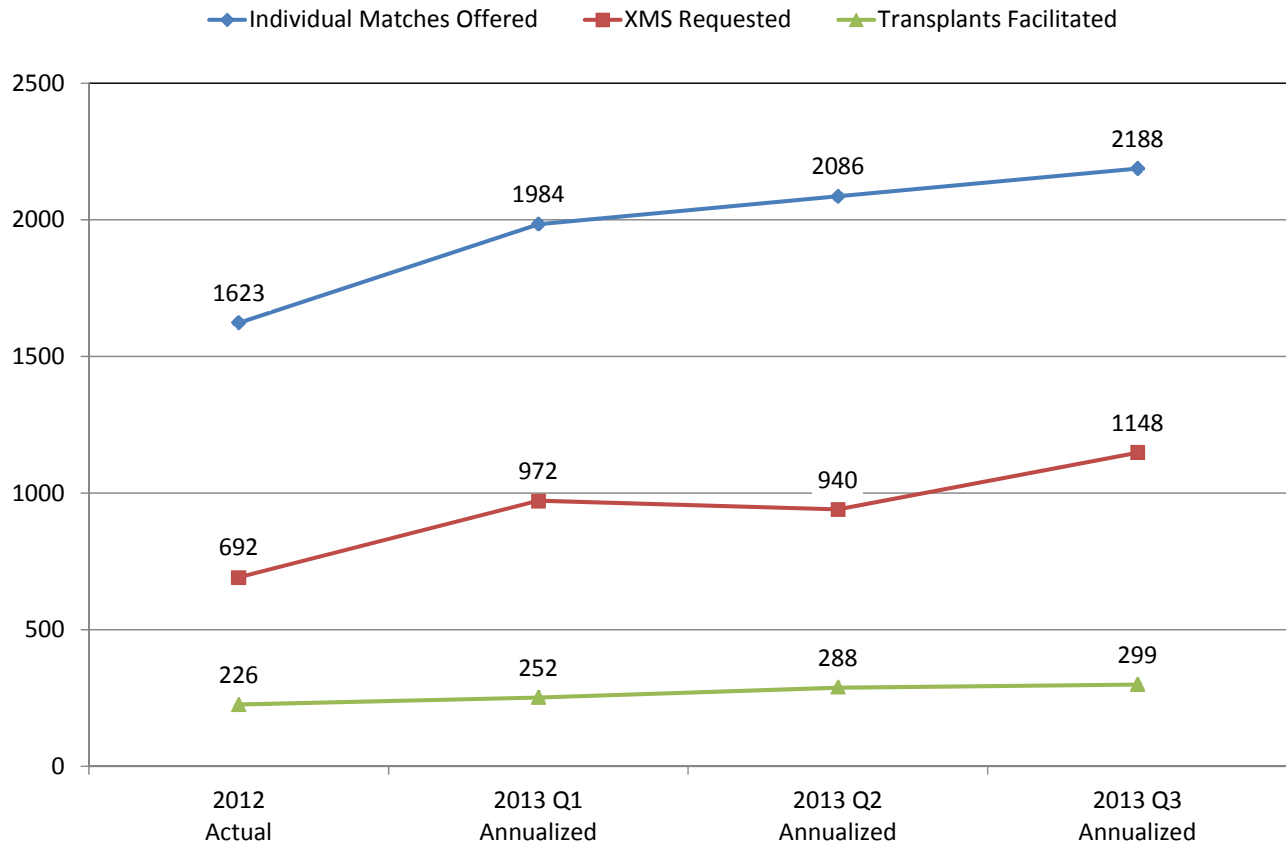


Pool Size - Unmatched Recipients

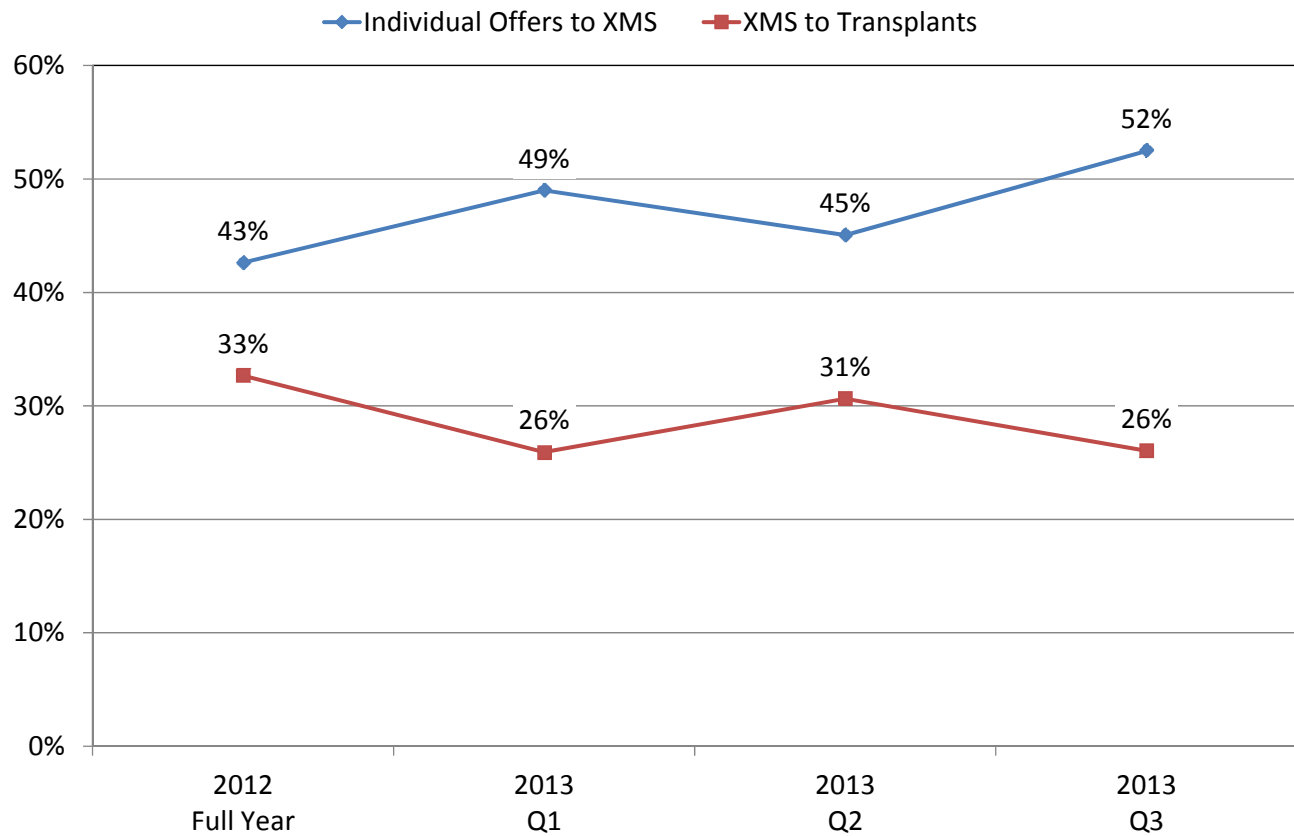
1/1/2012 - 9/30/2013



Process Volume

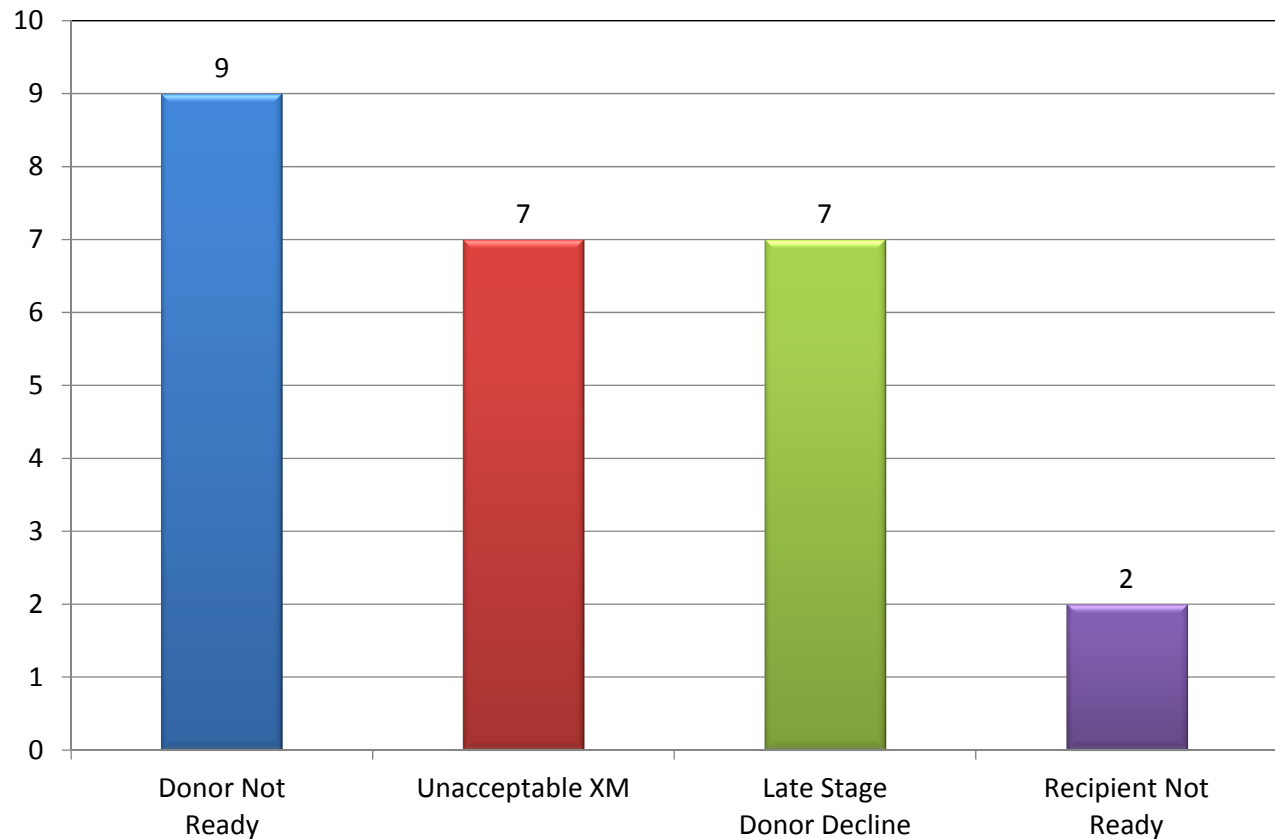


Match Conversion Rates



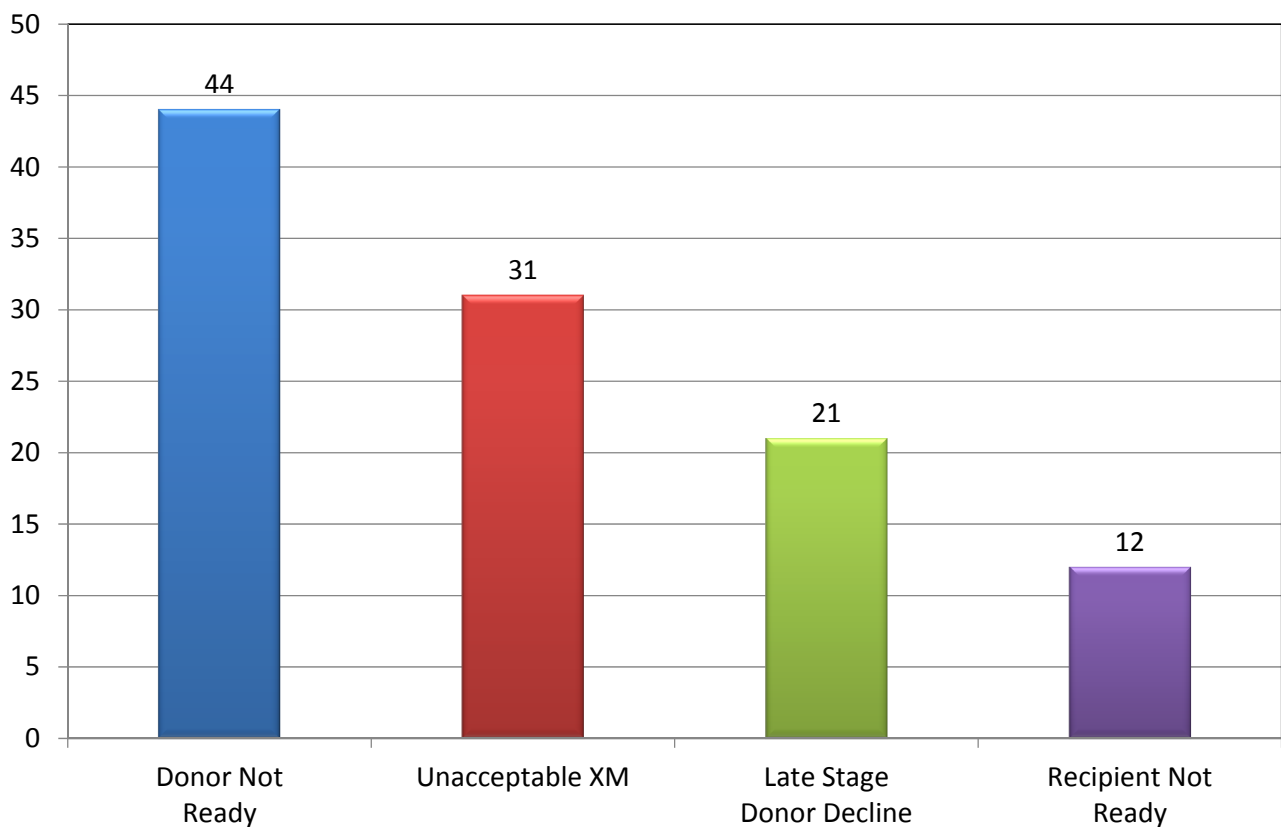
Swap Failures by Primary Root Cause

Q3 2013



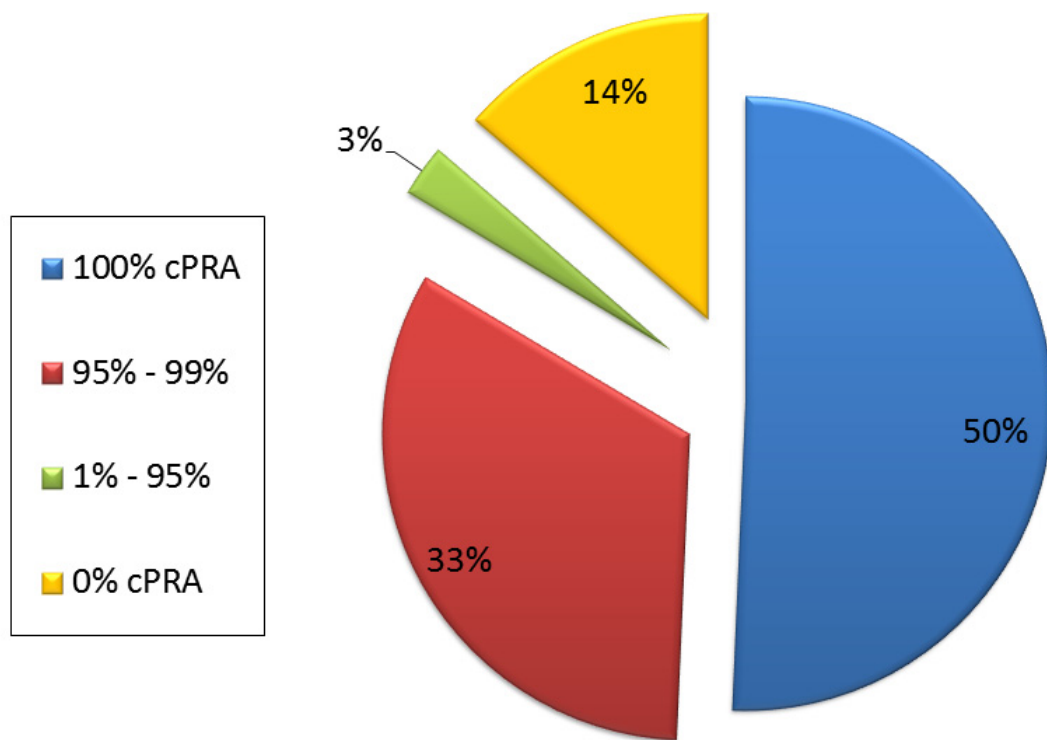
Transplants Impacted by Primary Root Cause

Q3 2013



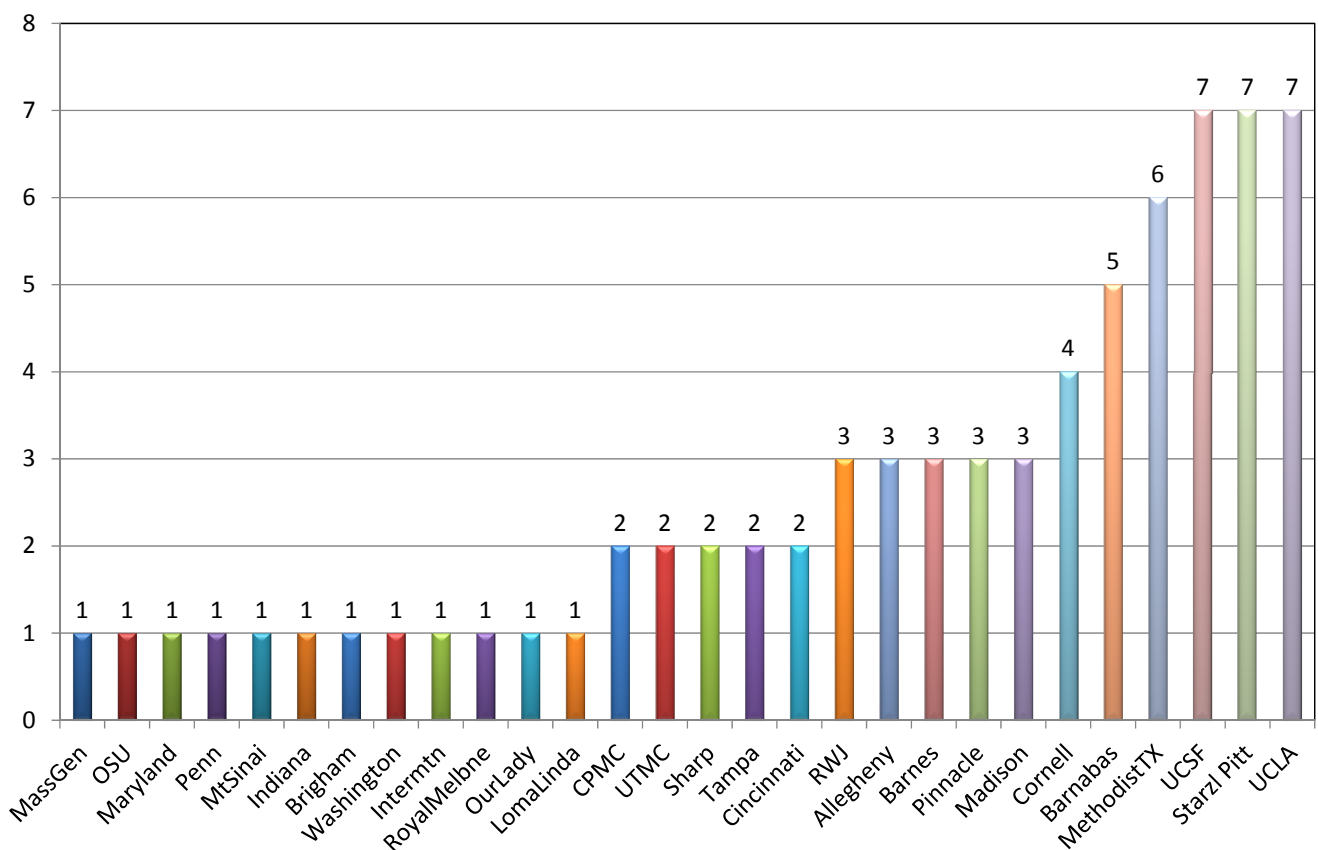
Patients Waiting > 1 Year by cPRA

As of 9/30/2013



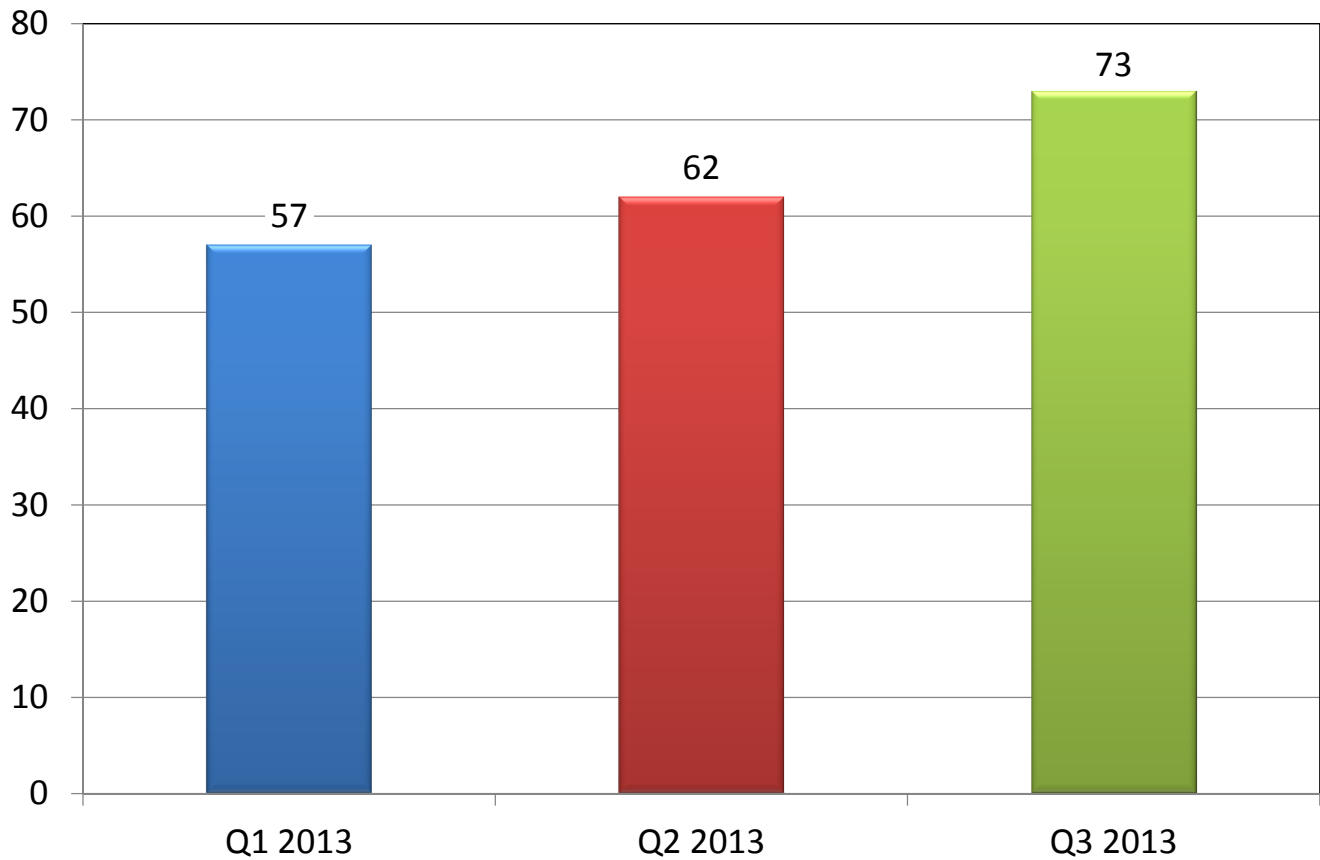
Patients Waiting > 1 Year by Center

As of 9/30/2013



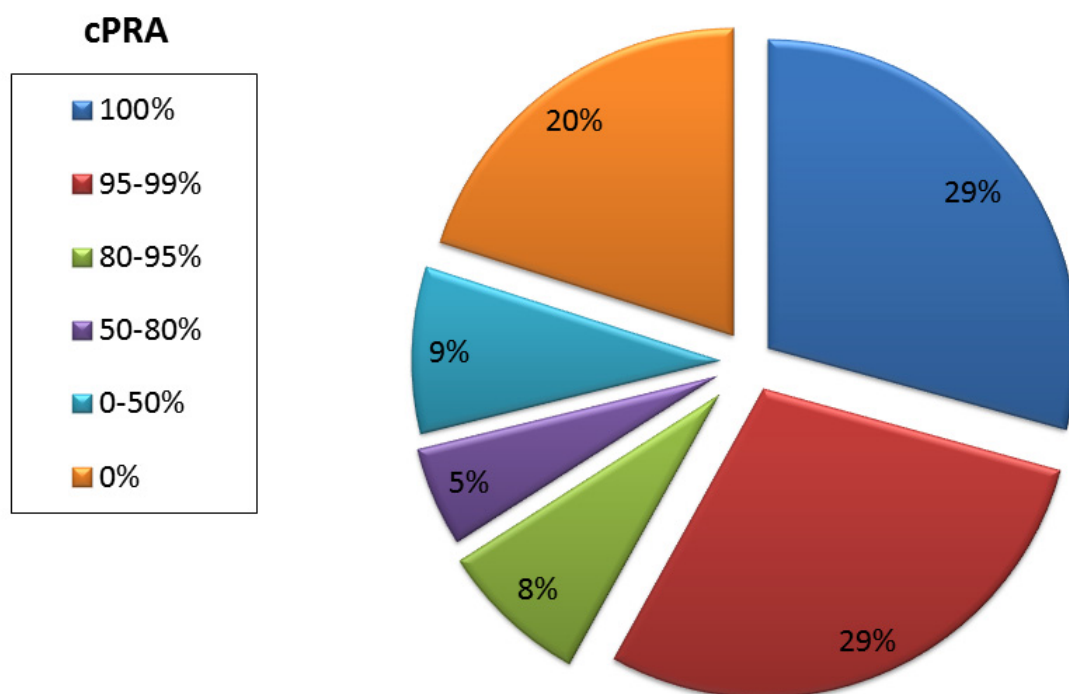
Patients Waiting > 1 Year

As of 9/30/2013



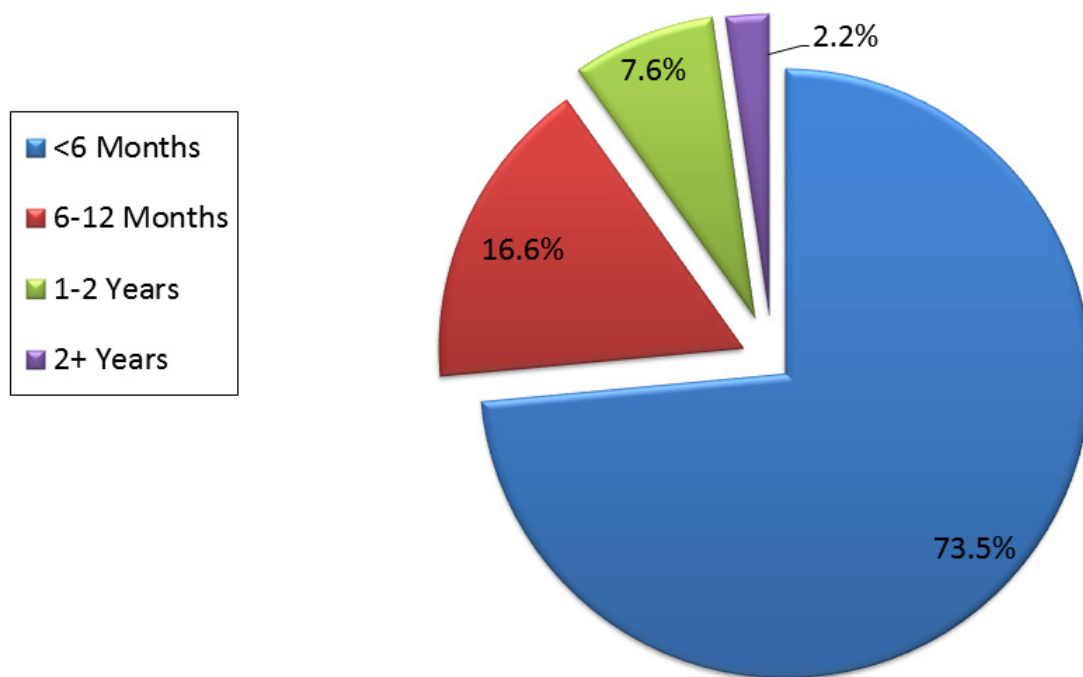
Pool Composition by cPRA

As of 9/30/2013

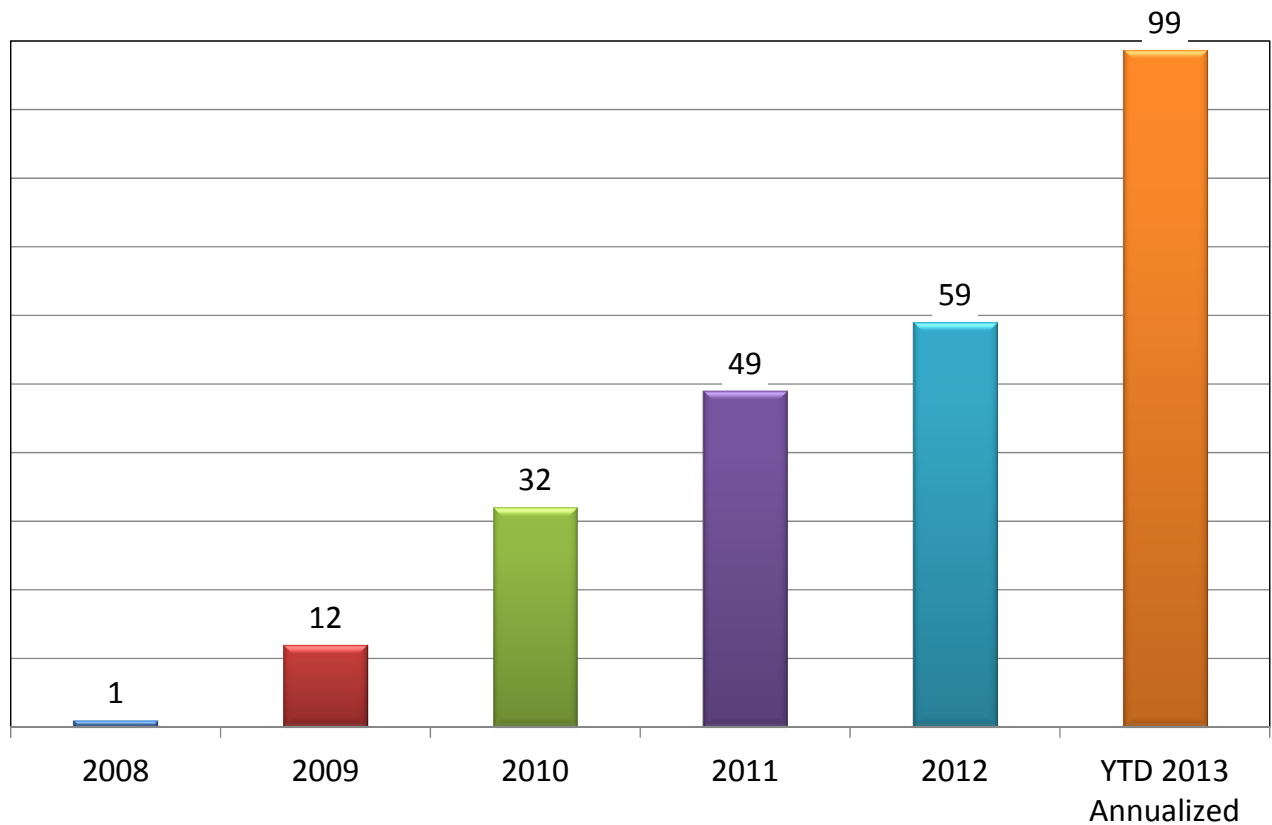


2013 Transplants by Wait Time

90% of transplanted patients waited < 12 months

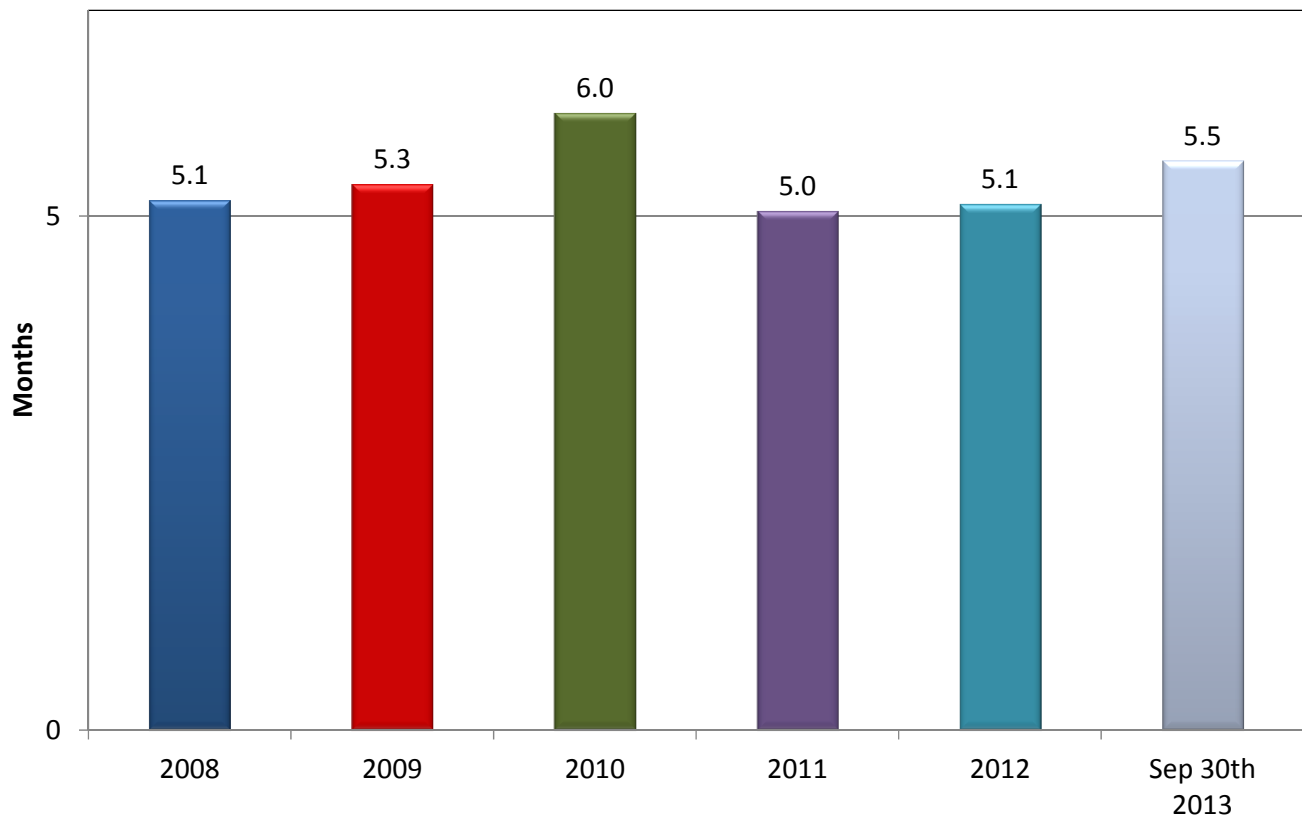


Transplanted Patients with cPRA > 80%



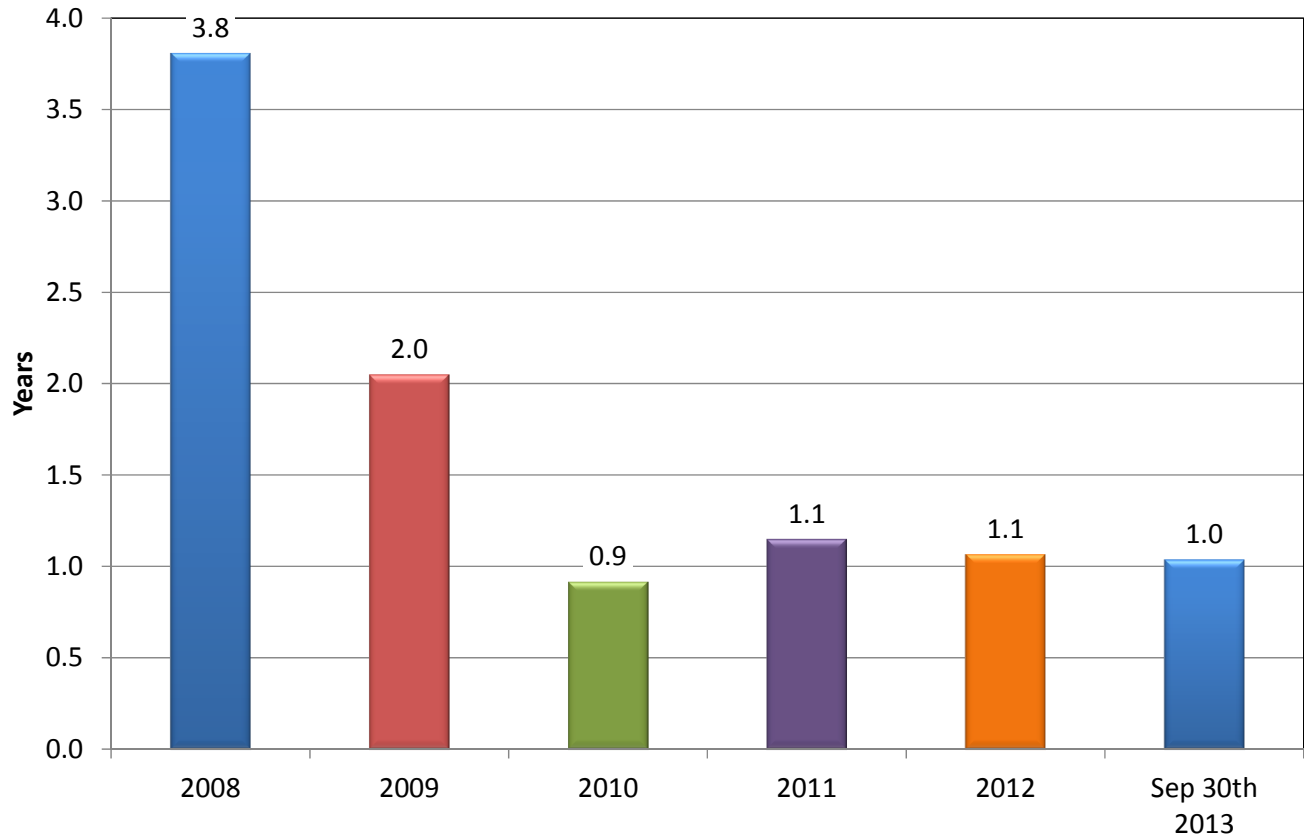
Transplanted Patient Average Wait Time

The average of the actual wait times of patients transplanted during the year

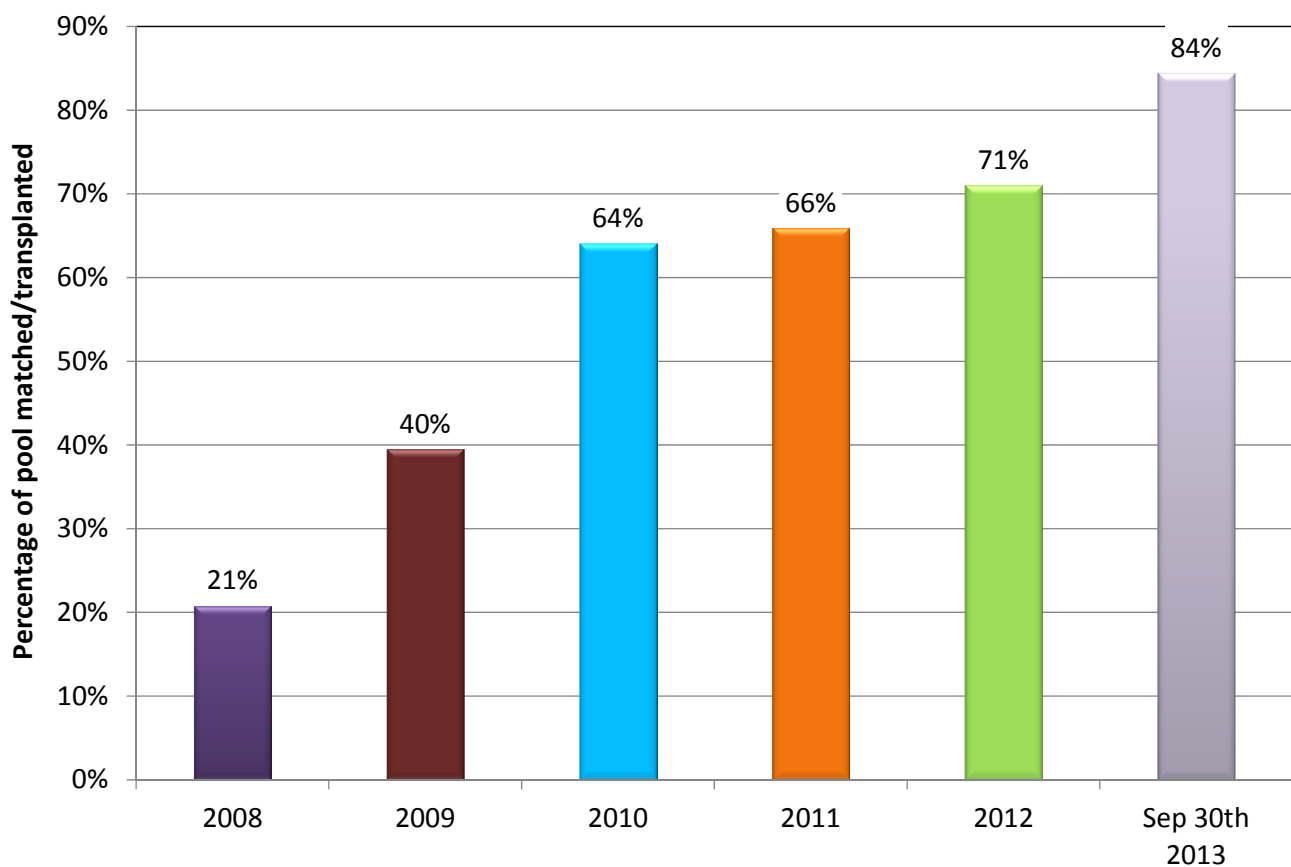


Enrolled Patient Average Wait Time

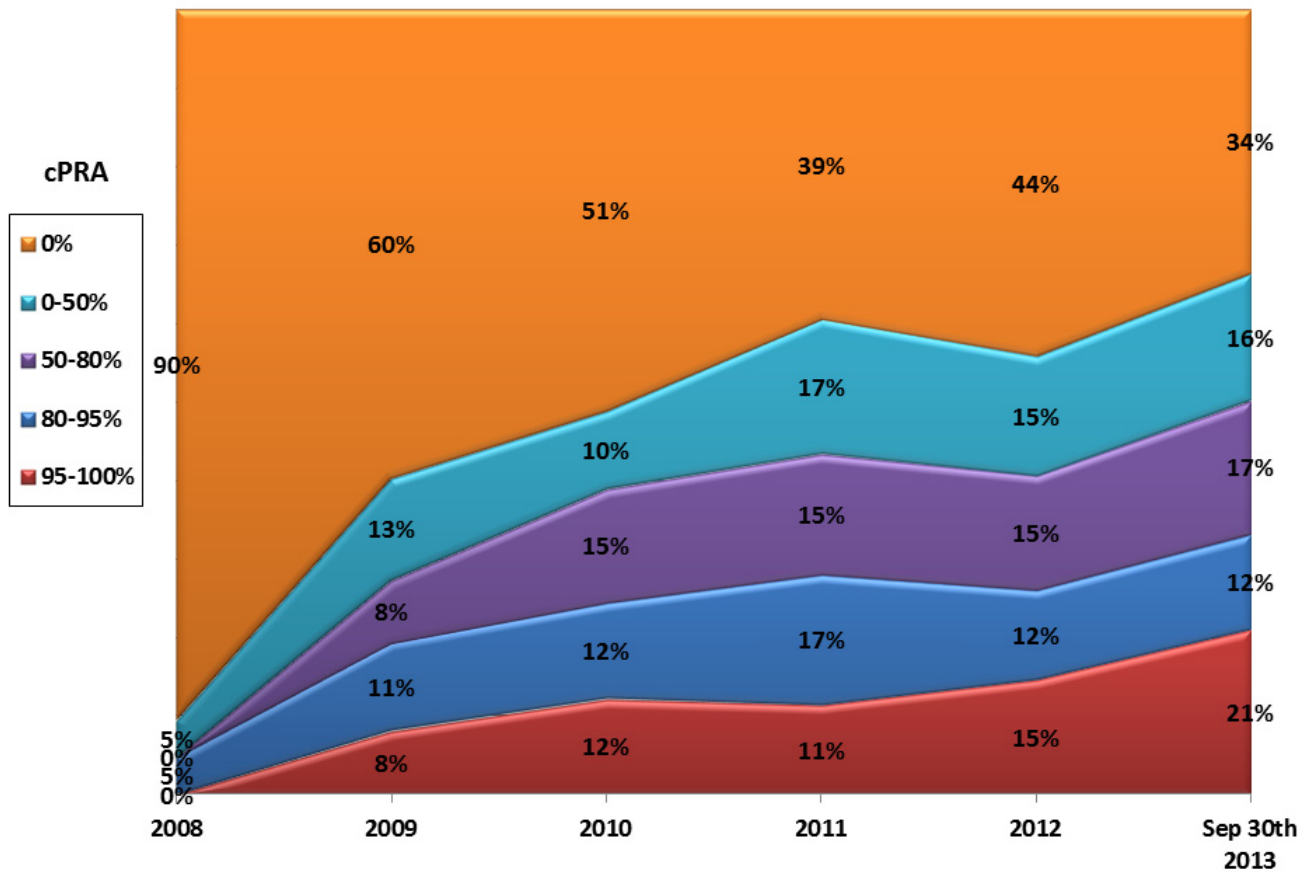
Ending unmatched patient pool/annual transplant run rate



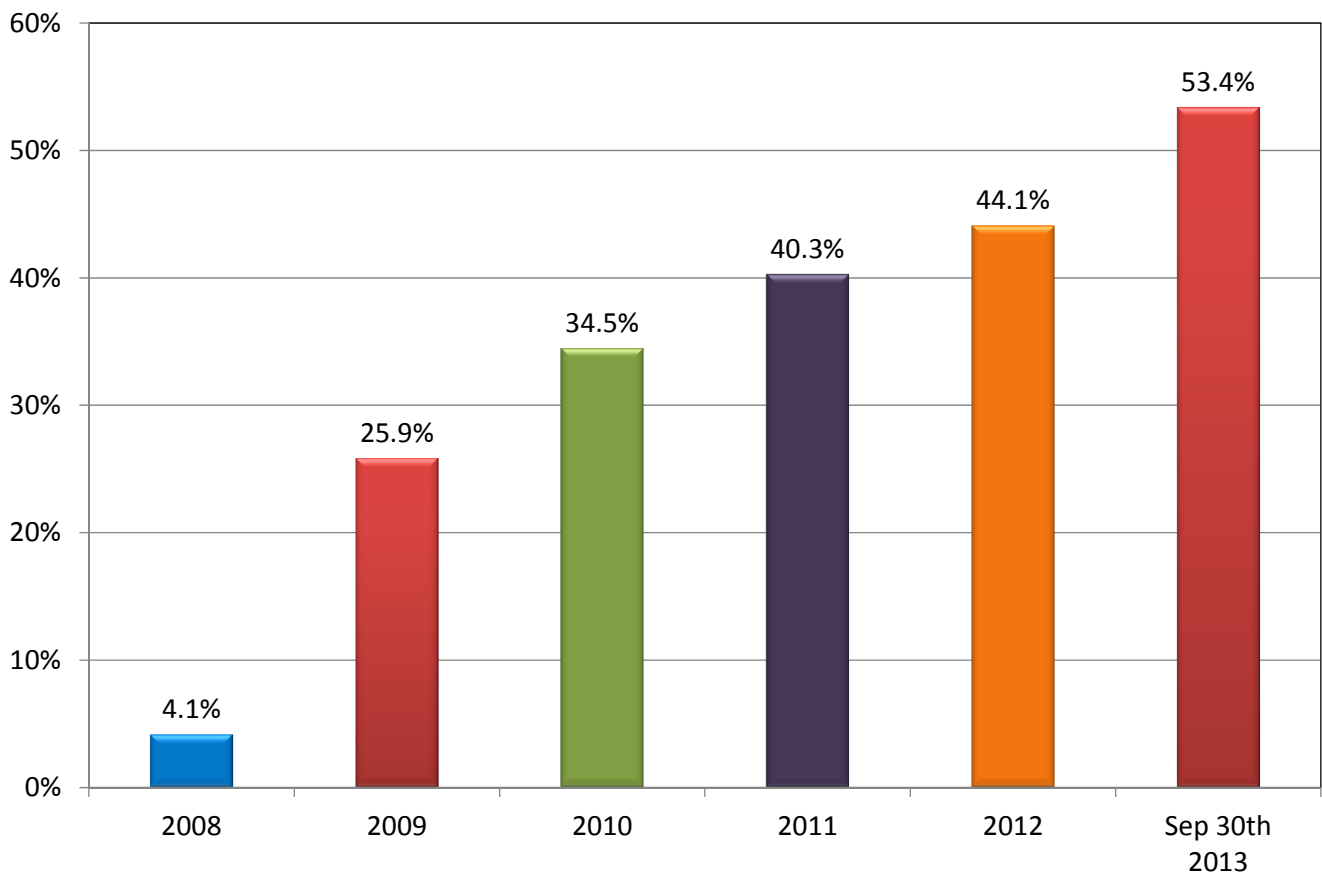
Cumulative Pool Matched/Transplanted by Year



Transplanted Patients by Year by cPRA



Average cPRA of Transplanted Patients by Year



Broken Chains by Year - Detail

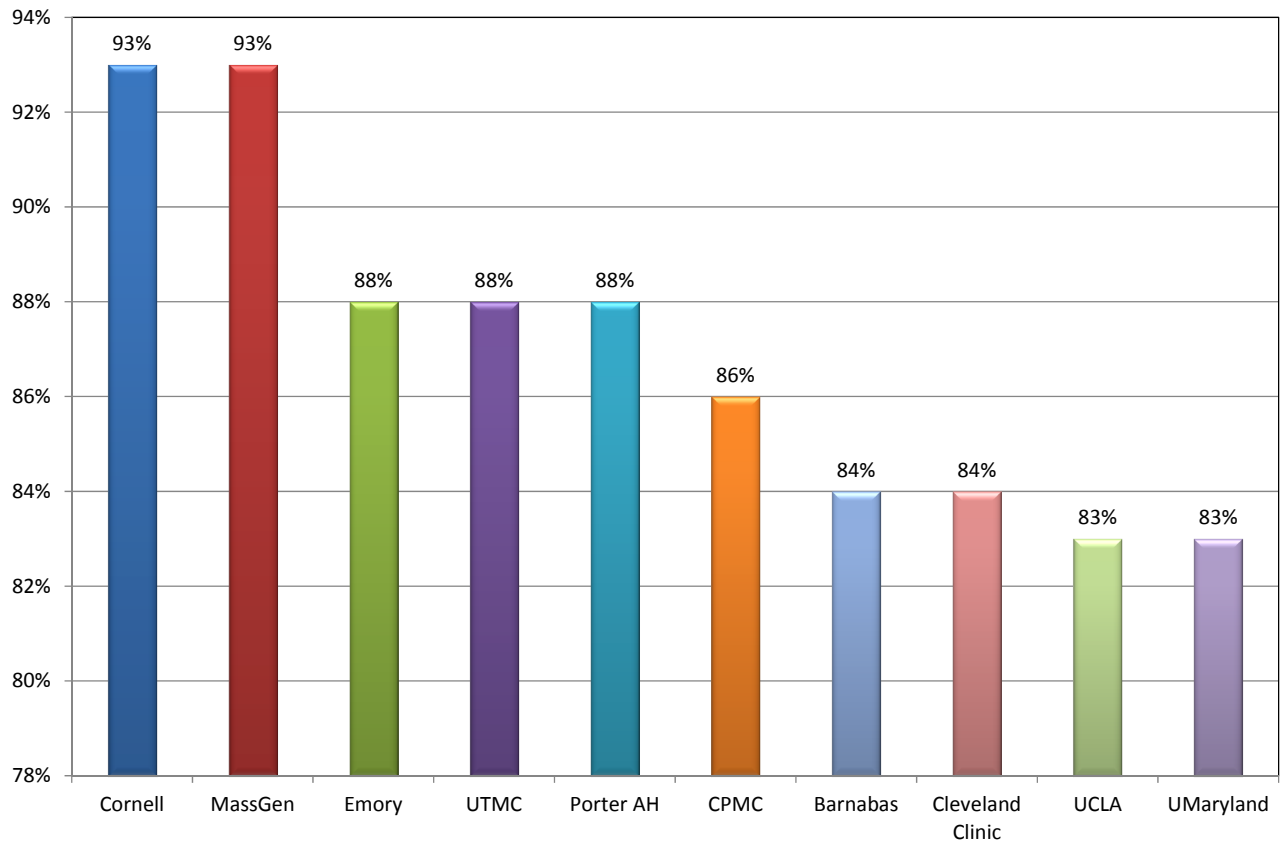
Year	# Bridge Donors	# Broken Chains	% Broken Per Year
2008	9	3	33%
2009	29	2	7%
2010	61	2	3%
2011	75	0	0%
2012	54	4	7%
2013 Est.	60	2	3%
Total Bridge Donors	285	13	

Summary of Broken Chains

#	Reason Given	Center	Date
1	Job Issues/ long wait time/ many failed XMs	Cornell	5/1/2008
2	No Reason	Cornell	8/21/2008
3	No Reason	CPMC	11/19/2008
4	Two cancelled swaps/ long wait time	UTMC	6/9/2009
5	Medical	UCSF	11/10/2009
6	Medical	UCLA	3/16/2010
7	Second nuclear GFR test < 80 (79 down from 82)	AGH	9/16/2010
8	No Reason	MethodistTX	2/3/2012
9	No Reason	UCSF	4/4/2012
10	Medical	UCLA	6/28/2012
11	Medical/Surgical	Washington	11/5/2012
12	Real Time Swap Failure – Aborted donor surgery	CPMC	6/27/2013
13	Real Time Swap Failure – Kidney declined by recipient surgeon	RWJ/UPenn	7/23/2013

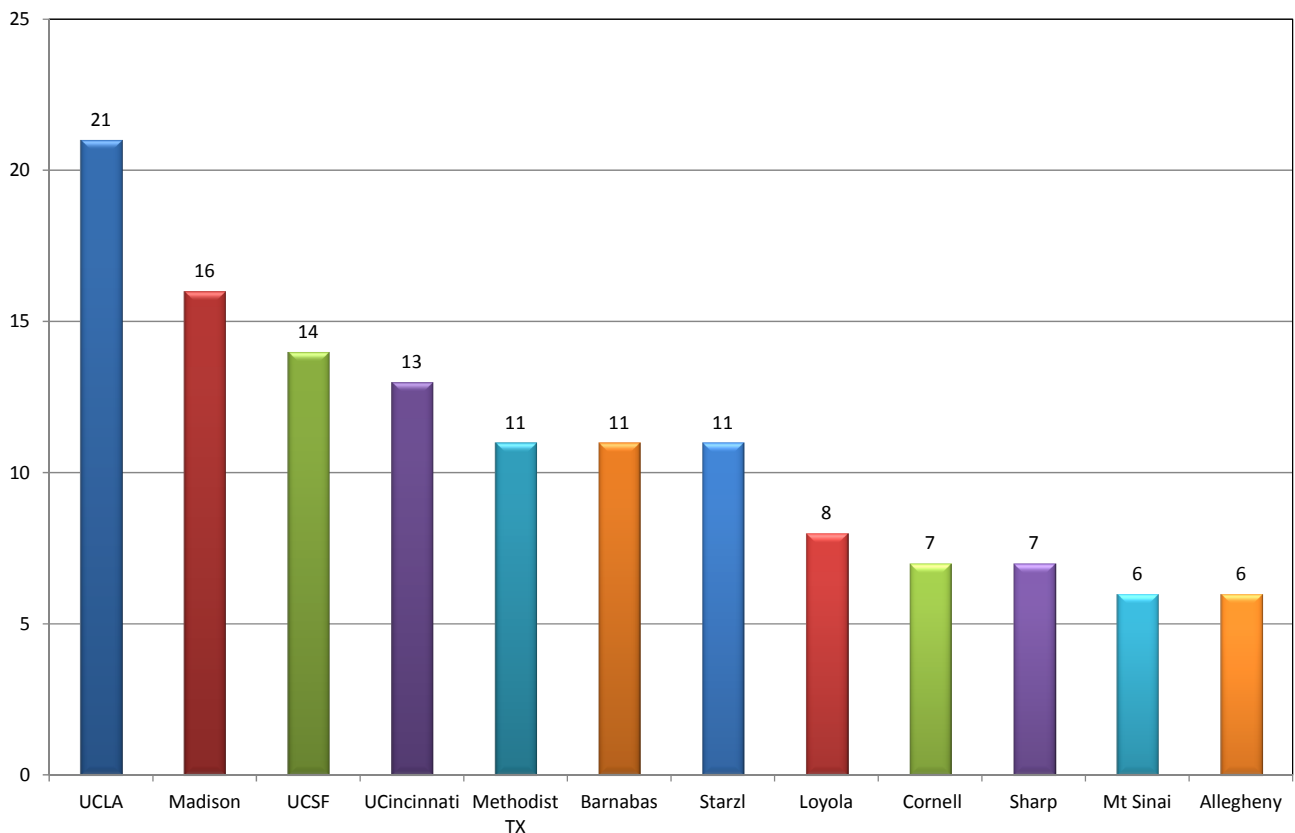
Top 10 Centers

% of Pairs Transplanted Through NKR



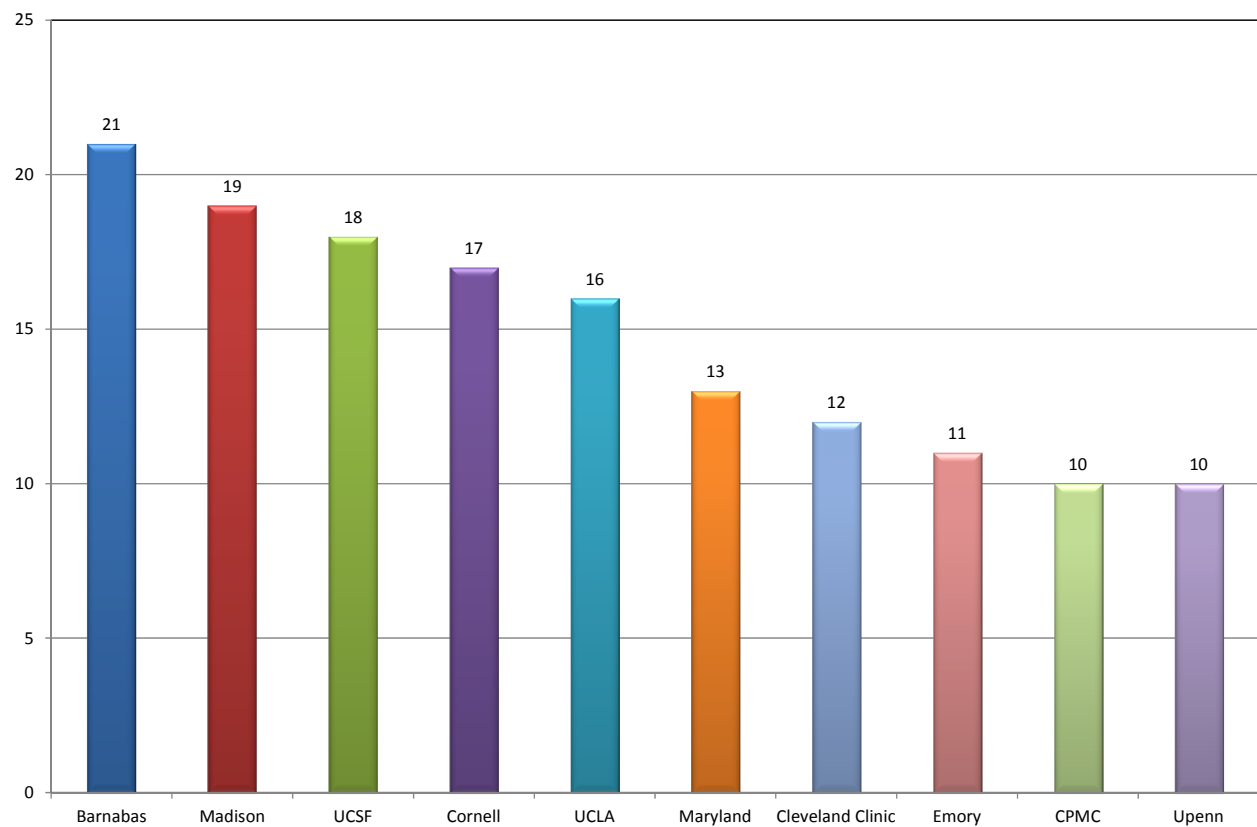
Top 12 Centers

Pairs Active in NKR



Top 10 Centers

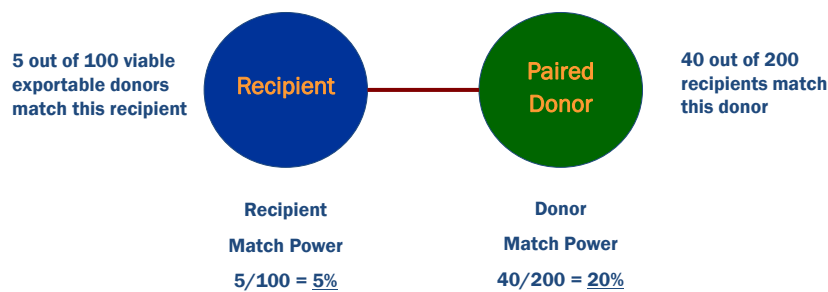
Transplants in Last 12 Months



Pair Match Power is the Key to Understanding Wait Time

Pair Match Power (a.k.a. PMP) is the most accurate predictor of paired exchange wait time and should be used by patients and clinicians to develop individual matching strategies for all pairs enrolling in the NKR program

How is PMP Calculated



$$\text{PMP} = (5\% \times 20\% \times 10,000) + (5\% \times 1,000) = \underline{150}$$

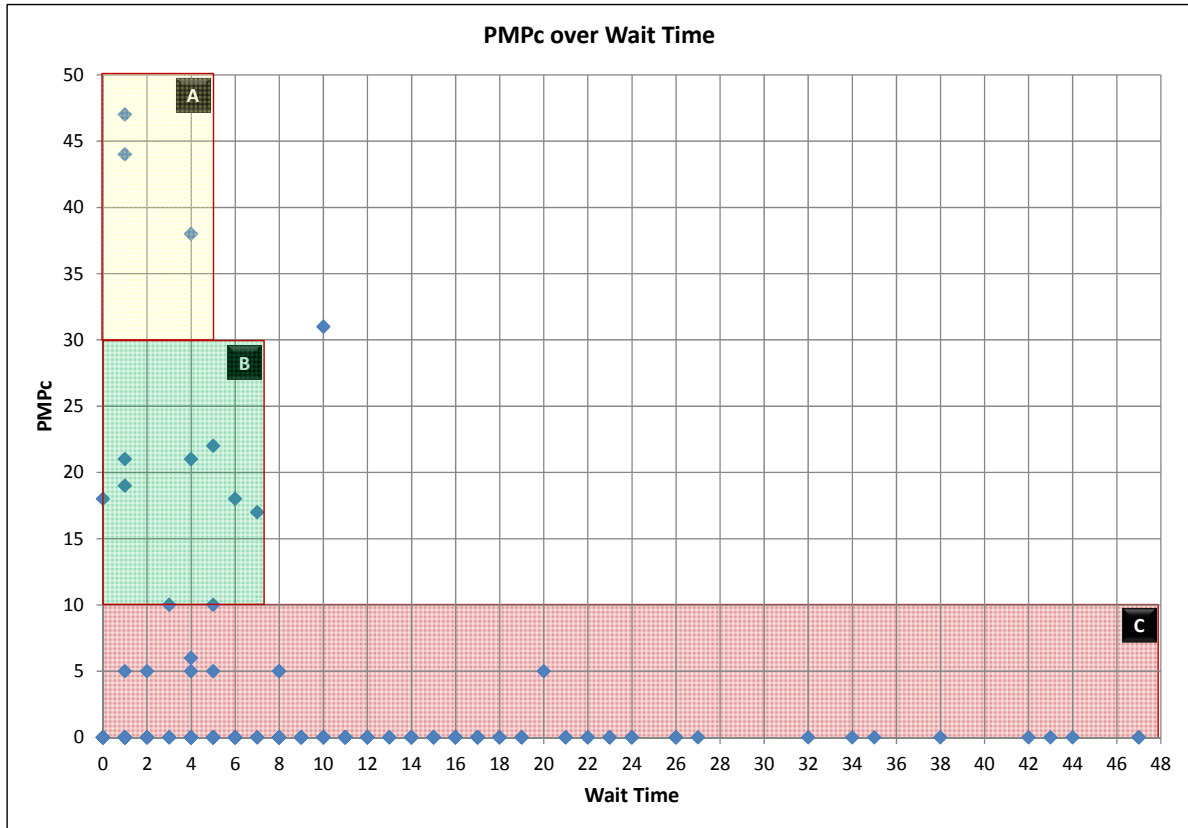
NKR Wait Time Expectations

Group	Match Descriptions	Pair's PMPc Score	Pair's ABO Combo	Wait Time Range In Months	Center Response
A	Easy Match	>30	Easy	0 - 6	Watch for match offer & get pair ready for surgery
B	Hard Match	10 - 30	Easy	0 - 12	Implement advanced matching strategies
C	Very Hard Match	<10	Easy	Unknown	Get lab director involved
D	Hard Match	N/A	Hard *	0 - 18	Relax preferences & work up additional paired donors

* Lightly Sensitized (<80% NKR cPRA) recipients with A/B/AB paired donors

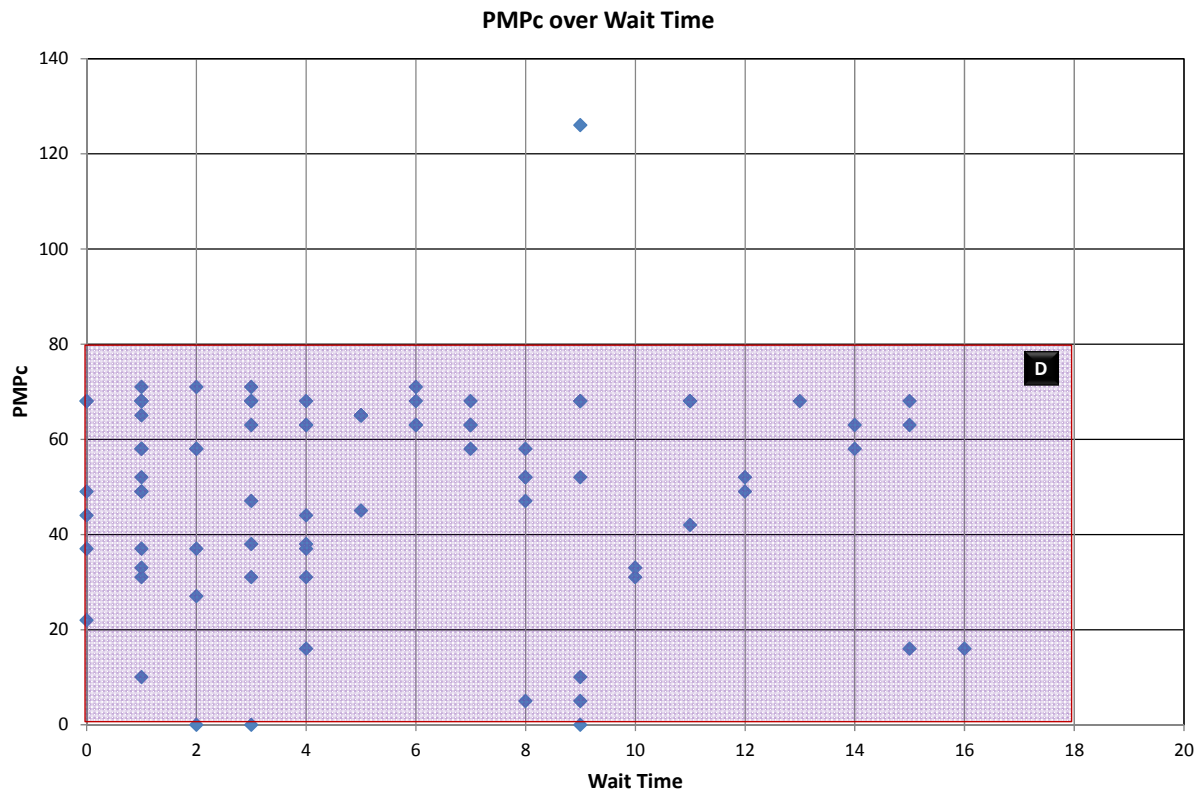
Unmatched Pool

Excluding lightly sensitized O's with A/B/AB donors



Unmatched Pool

Lightly sensitized O's with A/B/AB donors



NKR Program Statistics

		2008	2009	2010	2011	2012	Sep 30th 2013
1	Transplants Facilitated	21	62	131	175	226	223
2	Paired Transplants Facilitated	21	39	91	131	164	184
3	Chip Transplants Facilitated	0	23	40	44	62	39
4	Ending Unmatched Patient Pool	80	127	120	201	241	229
5	Cumulative Transplants	21	83	214	389	615	838
6	Cumulative Paired Transplants	21	60	150	280	526	709
7	Cumulative Chip Transplants	0	23	64	109	89	129
8	Cumulative Paired Patient Pool	101	210	334	590	805	993
9	Percent of Pool Transplanted (Paired Recipients)	21%	40%	64%	66%	71%	84%
10	Enrolled Patient Average Wait Time (years)	3.8	2.0	0.9	1.1	1.1	1.0
11	Transplanted Patient Average Wait Time(months)	5.1	5.3	6.0	5.0	5.1	5.5
12	Average cPRA of Transplanted Patients	4.1%	25.9%	34.5%	40.3%	44.1%	53.4%
13	Number of Transplants Completed by cPRA						
14	100%	0	1	4	10	4	3
15	95-100%	0	4	12	10	29	44
16	80-95%	1	7	16	29	26	27
17	50-80%	0	5	19	27	33	38
18	0-50%	1	8	13	30	34	36
19	0%	19	37	67	69	100	75
20	Sub-total	21	62	131	175	226	223
21	Percent of Transplants Completed by cPRA						
22	100%	0%	2%	3%	6%	2%	1%
23	95-100%	0%	6%	9%	6%	13%	20%
24	80-95%	5%	11%	12%	17%	12%	12%
25	50-80%	0%	8%	15%	15%	15%	17%
26	0-50%	5%	13%	10%	17%	15%	16%
27	0%	90%	60%	51%	39%	44%	34%
28	Sub-total	100%	100%	100%	100%	100%	100%
29	Number of Transplanted Patients with cPRA >80%	1	12	32	49	59	74
30	Percent of Transplanted Patients with cPRA >80%	5%	19%	24%	28%	26%	33%
31	Number of Unmatched Patients by cPRA (9/30/2013)						
32	100%					73	67
33	95-99%					73	66
34	80-95%					15	18
35	50-80%					11	12
36	0-50%					10	20
37	0%					59	46
38	Sub-total					241	229
39	Percent of Unmatched Patients by cPRA (9/30/2013)						
40	100%					30%	29%
41	95-99%					30%	29%
42	80-95%					6%	8%
43	50-80%					5%	5%
44	0-50%					4%	9%
45	0%					24%	20%
46	Sub-total					100%	100%
47	Number of Transplants Completed by Wait Time (9/30/2013)						
48	< 6 months	21	42	74	106	180	164
49	6-12 months	0	10	14	19	24	37
50	1-2 years	0	4	15	14	20	17
51	2+ years	0	0	2	2	2	5
52	Sub-total	21	56	105	141	226	223
53	Percent of Transplants Completed by Wait Time (9/30/2013)						
54	< 6 months	100.0%	75.0%	70.5%	75.2%	79.6%	73.5%
55	6-12 months	0.0%	17.9%	13.3%	13.5%	10.6%	16.6%
56	1-2 years	0.0%	7.1%	14.3%	9.9%	8.8%	7.6%
57	2+ years	0.0%	0.0%	1.9%	1.4%	0.9%	2.2%
58	Sub-total	100%	100%	100%	100%	100%	100%
59	Total Chains Started	3	8	28	38	54	31
60	Total Loops Completed	0	3	2	3	12	20
61	Number of broken chains	3	2	2	0	4	2
62	Bridge Donors Held (2013 estimated)	9	29	61	75	54	60
63	Percent of broken chains	33%	7%	3%	0%	7%	3%



P.O. Box 460 • Babylon • NY 11702-0460

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