



# Utilization of High KDPI Kidneys

Emilio D. Poggio, M.D.

Medical Director, Kidney and Pancreas Transplant Program  
Cleveland Clinic



CUTTING EDGE OF  
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**RESOLVING THE ORGAN SHORTAGE**



PRACTICE |



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POLITICS

FEBRUARY 25-27, 2016 • PHOENIX, ARIZONA

# Disclosures

I have no financial relationships to disclose relevant to this presentation

- One of the goals of KAS is to make better utilization of available kidneys so as to increase overall transplant longevity
- This goal could be in part achieved by better use of high KDPI kidneys (KDPI>85%)

## Data periods for this presentation

- Pre-KAS                      06/04/2014 to 12/03/2014
  - Post-KAS1                    12/04/2014 to 06/03/2015
  - Post-KAS2                    06/04/2015 to 12/03/2015
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- Source: UNOS Research Department, provided on February 05, 2016
  - Special thank to UNOS, Darren Stewart and his team for facilitating the updated data

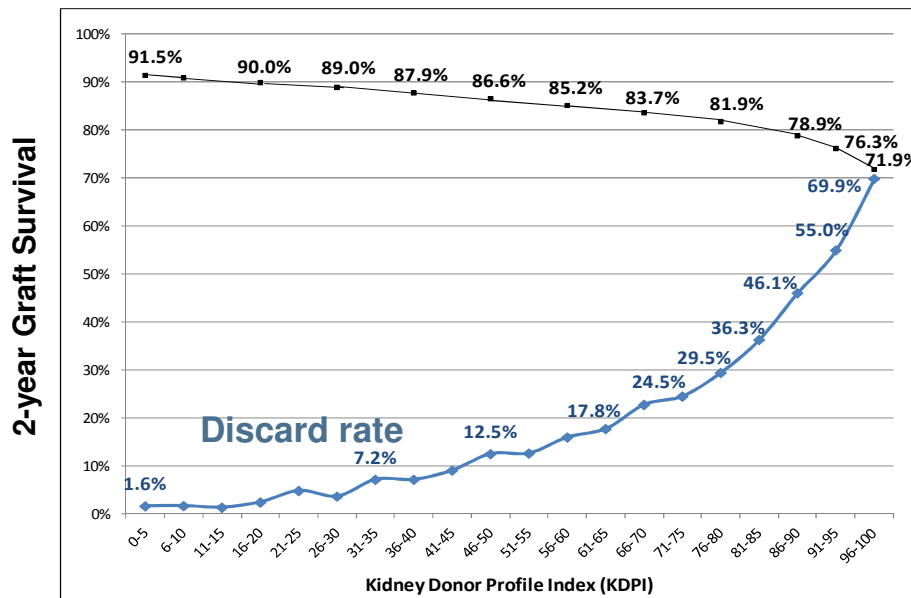
# Questions

- 1) What are the utilization rates (acceptance vs discard) for high KDPI kidneys?
- 2) Who is getting these kidneys?
- 3) Where are these kidneys being allocated? i.e., locally, regionally, etc.

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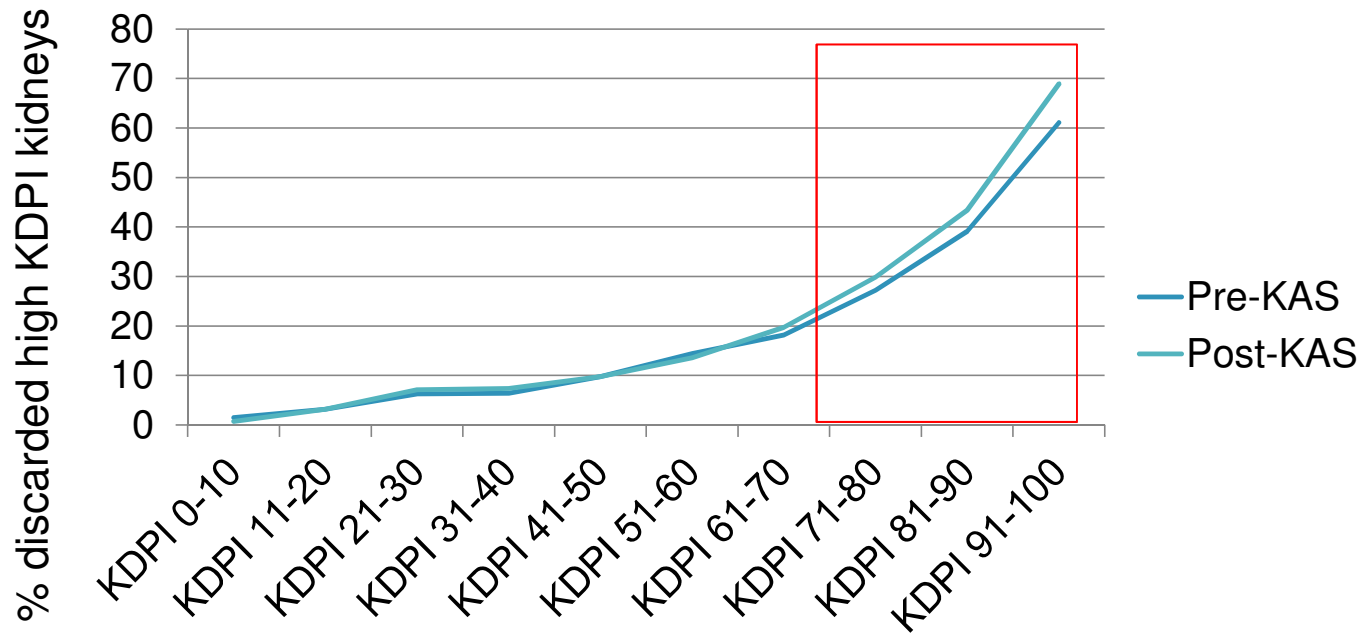
# High KDPI Organ Allocation



D. Stewart, ATC 2013 (Abstract #301)

1. Non-linear association between KDPI and graft survival rates
2. Non-linear association between KDPI and discard rates
3. Those high KDPI kidneys that are accepted may lead to reasonable graft survival

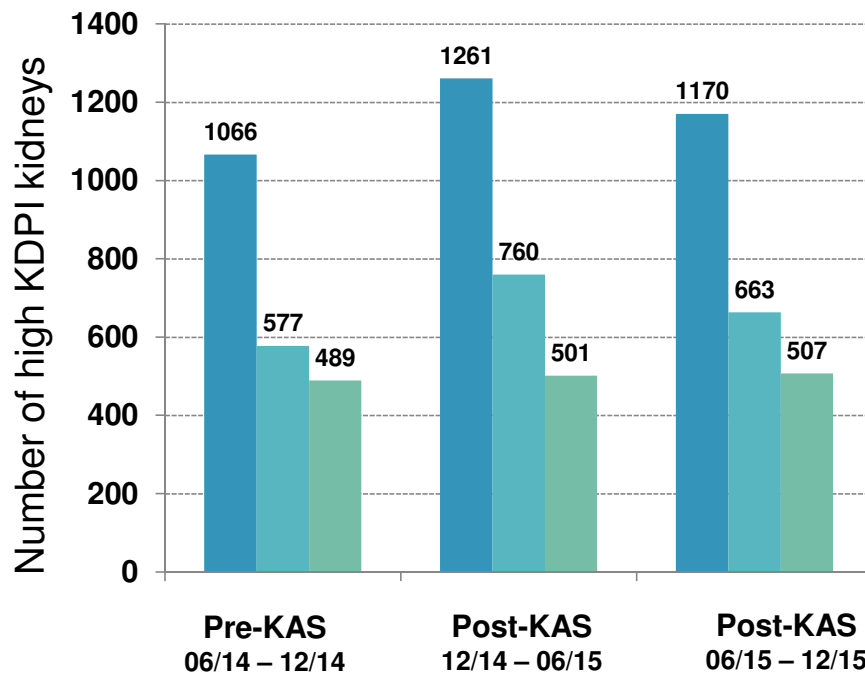
## Initial data suggested a slightly higher discard rate of high KDPI kidneys



KAS report 09/2015 – UNOS  
Table II.3b.



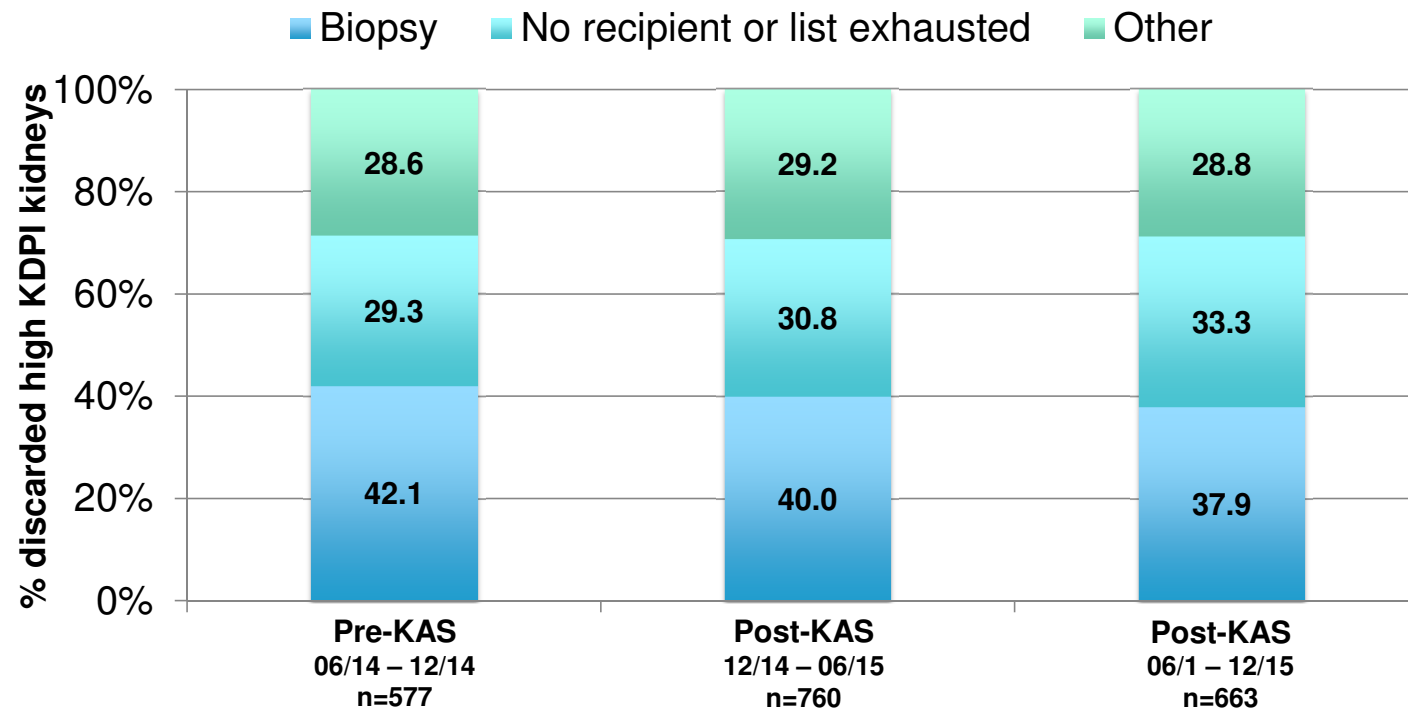
## Initial increase in post-KAS high KDPI kidney discard rate has stabilized in the second half of 2015



- Kidneys Recovered for Transplant
- Kidneys Recovered and not Transplanted
- Kidneys Transplanted

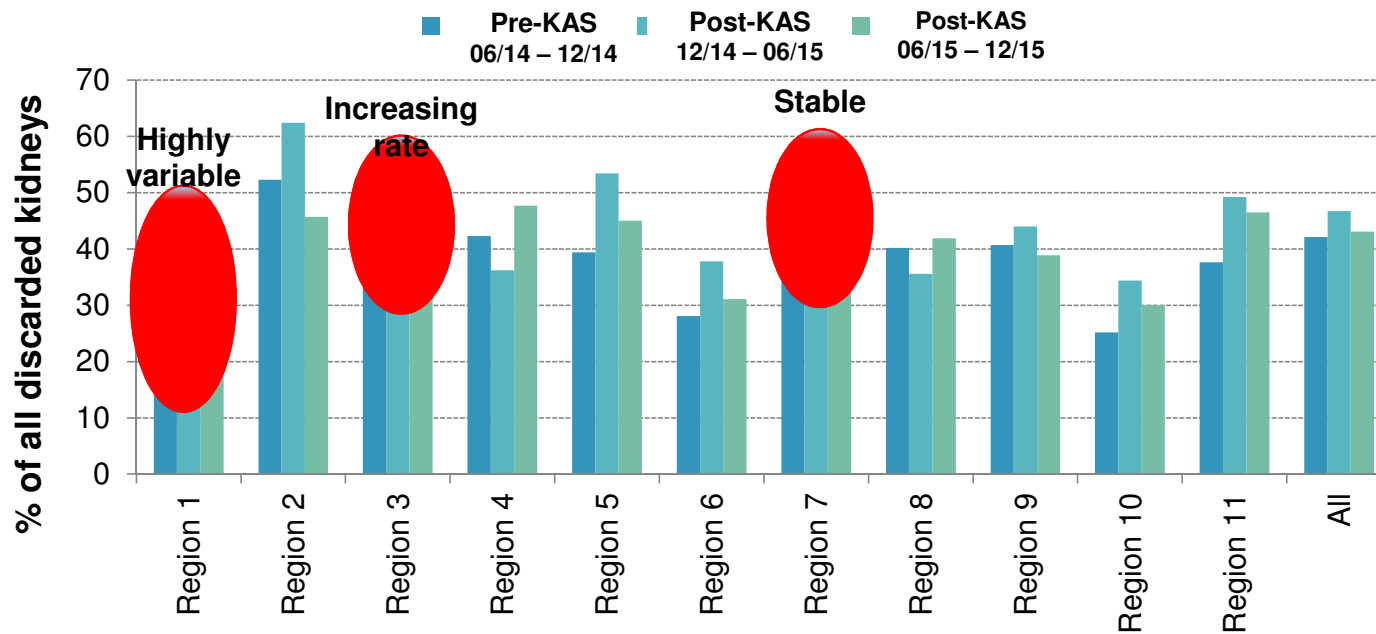
| Period     | Discard Rates |
|------------|---------------|
| Pre-KAS    | 54.1%         |
| Post-KAS 1 | 60.3%         |
| Post-KAS 2 | 56.7%         |
| Total      | 57.2%         |

## Slight increase in the proportion of discarded kidneys due to “no recipient” available where organ was allocated



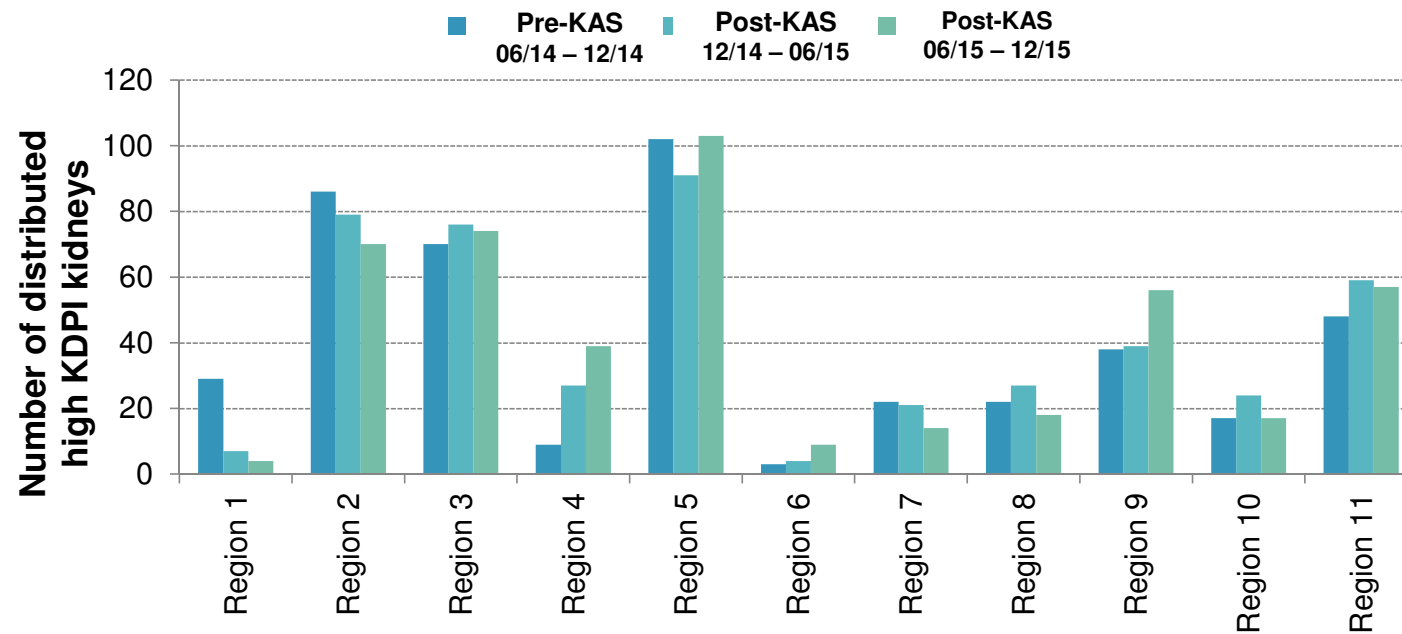
Other- too old on pump/ice, vascular/ureteral damage, donor medical/social history, donor HIV/Hec C, long ischemia times, poor organ function, donor infection, anatomical abnormalities

## Significant variability by region of high KDPI kidney discard rates



Note: Percent of discarded high KDPI kidneys in relation to all discarded kidneys, i.e., those with a KDPI of less than 85

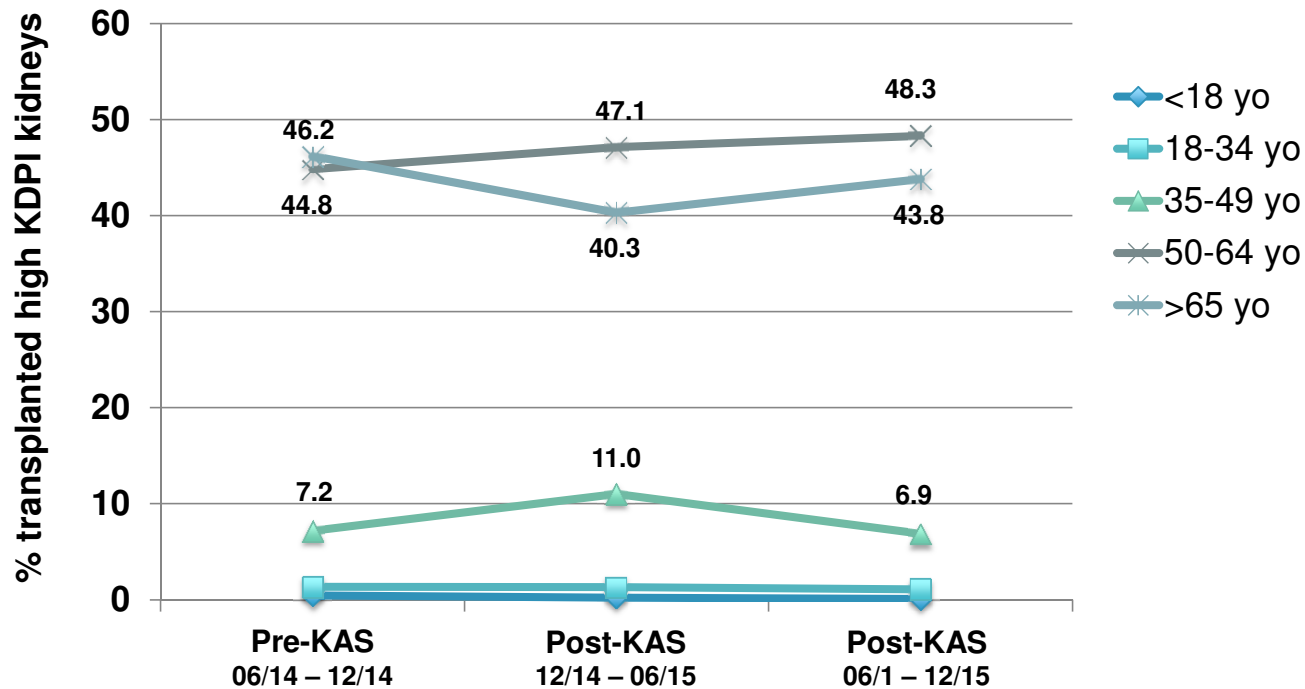
## Variability by region on the number of allocated high KPDI kidneys



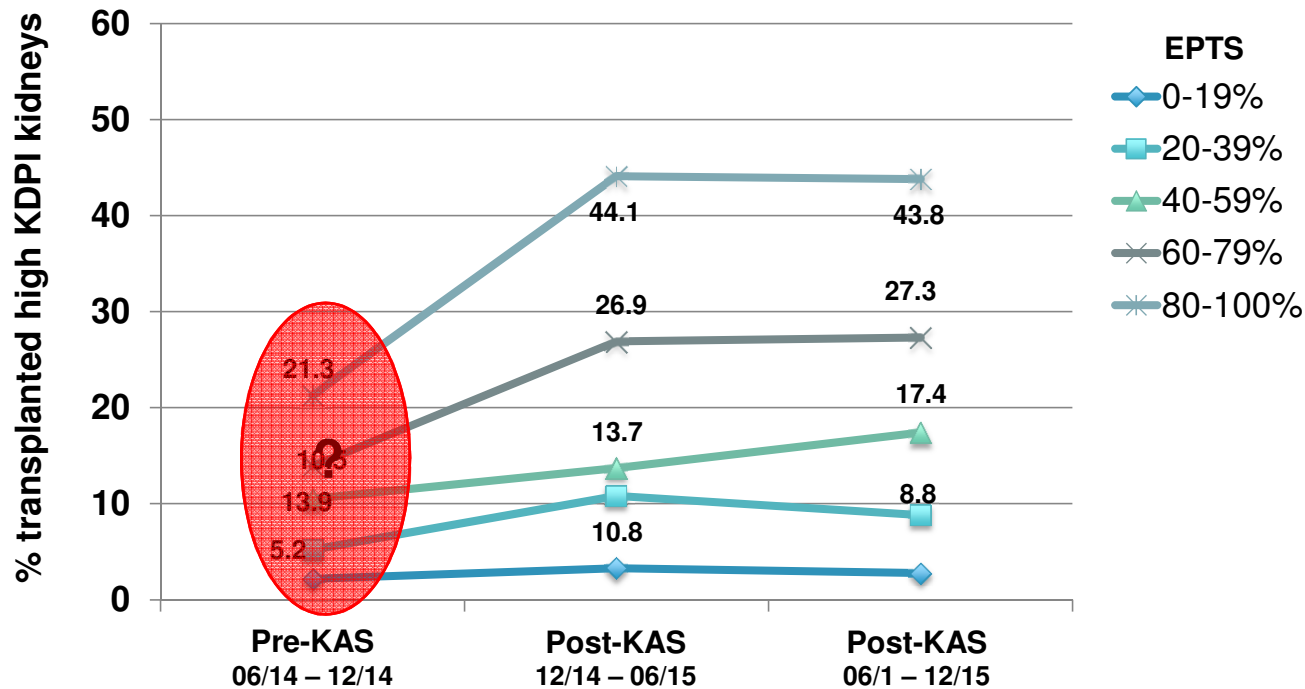
# Questions

- 1) What are the utilization rates (acceptance vs discard) for high KDPI kidneys?
- 2) **Who is getting these kidneys?**
- 3) Where are these kidneys being allocated? i.e., locally, regionally, etc.

## Increased use of high KDPI kidneys in the 50-64 yo age group post-KAS



## Increased use of high KDPI kidneys in those with high EPTS scores



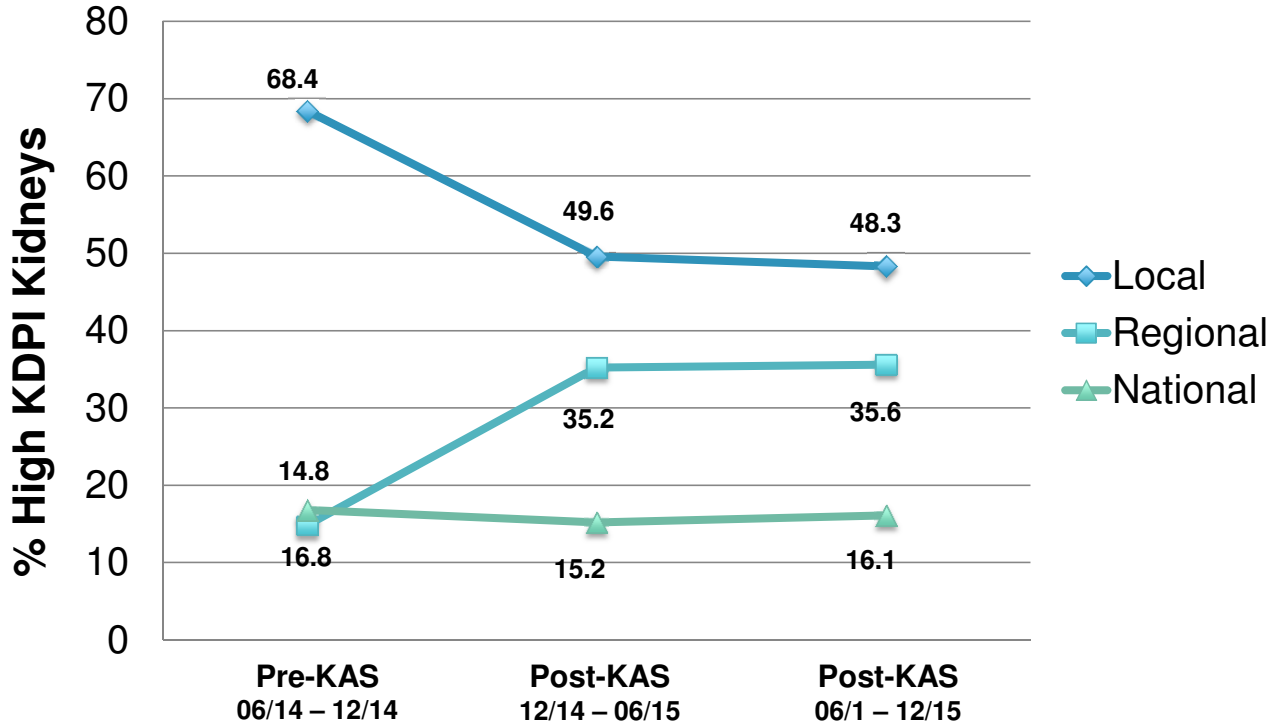
Note: 46% of missing data pre-KAS

# Questions

- 1) What are the utilization rates (acceptance vs discard) for high KDPI kidneys?
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- 3) Where are these kidneys being allocated? i.e., locally, regionally, etc.**



# Increased allocation of high KDPI kidneys from local to regional programs



# Summary

- After 1 year of KAS, the rate of high KDPI kidney discard rates may be returning back to pre-KAS rates
- There appears to be a subtle increase in the rate of discarded kidneys due to lack of potential recipient or list exhaustion
- There is a significant variability in the management of high KDPI kidneys by UNOS region
- There is an increase in the use of high KDPI kidneys in recipients between 50 and 64 yo
- While most high KDPI kidneys are still distributed locally, a significant number are now shared regionally

# Conclusions

- Better understanding of why high KDPI kidneys are not being transplanted will be important to improve utilization of this pool of organs
- **Further data is needed to better understand the dynamics of high KDPI organ utilization (acceptance vs. discard)**

# Thank You!

[poggioe@ccf.org](mailto:poggioe@ccf.org)

## Audience response question

Since implementation of KAS, which statement is FALSE regarding high KDPI kidneys?

- a. There is an increase in the allocation of these kidneys at the regional level rather than locally or nationally
- b. There is a continuous increase in discard rates since KAS implementation
- c. **The proportion of discarded kidneys because no suitable recipient was found is comparable to pre-KAS era**
- d. There is an increase in the utilization of these kidneys for recipients between 50-64 yo rather than in 65 yo or older

Correct answer highlighted in bold