

Toward a strategy to use more  
organs and distribute them to those  
in need

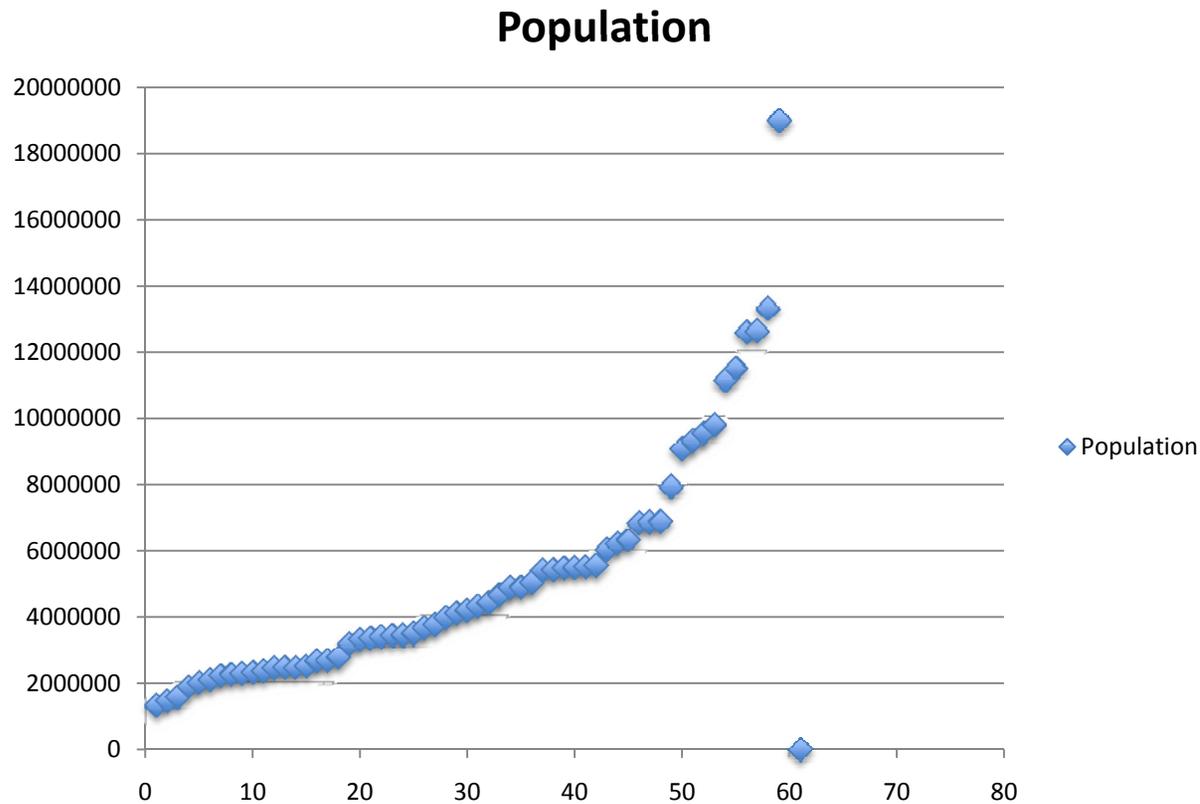
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# Considerations for allocation

- DSA based allocation results in vastly disparate silos of supply and demand
- Donation rates can not correct variations in the incidence of liver disease need
- Medical geography of patient care does not correlate with DSA boundaries
- The current system results in high organ wastage
- Marginal organs are the ones being shipped the farthest
- Centers must be incentivized to use the organs

# Populations of US OPO's



N=59

Mean 5.22 m

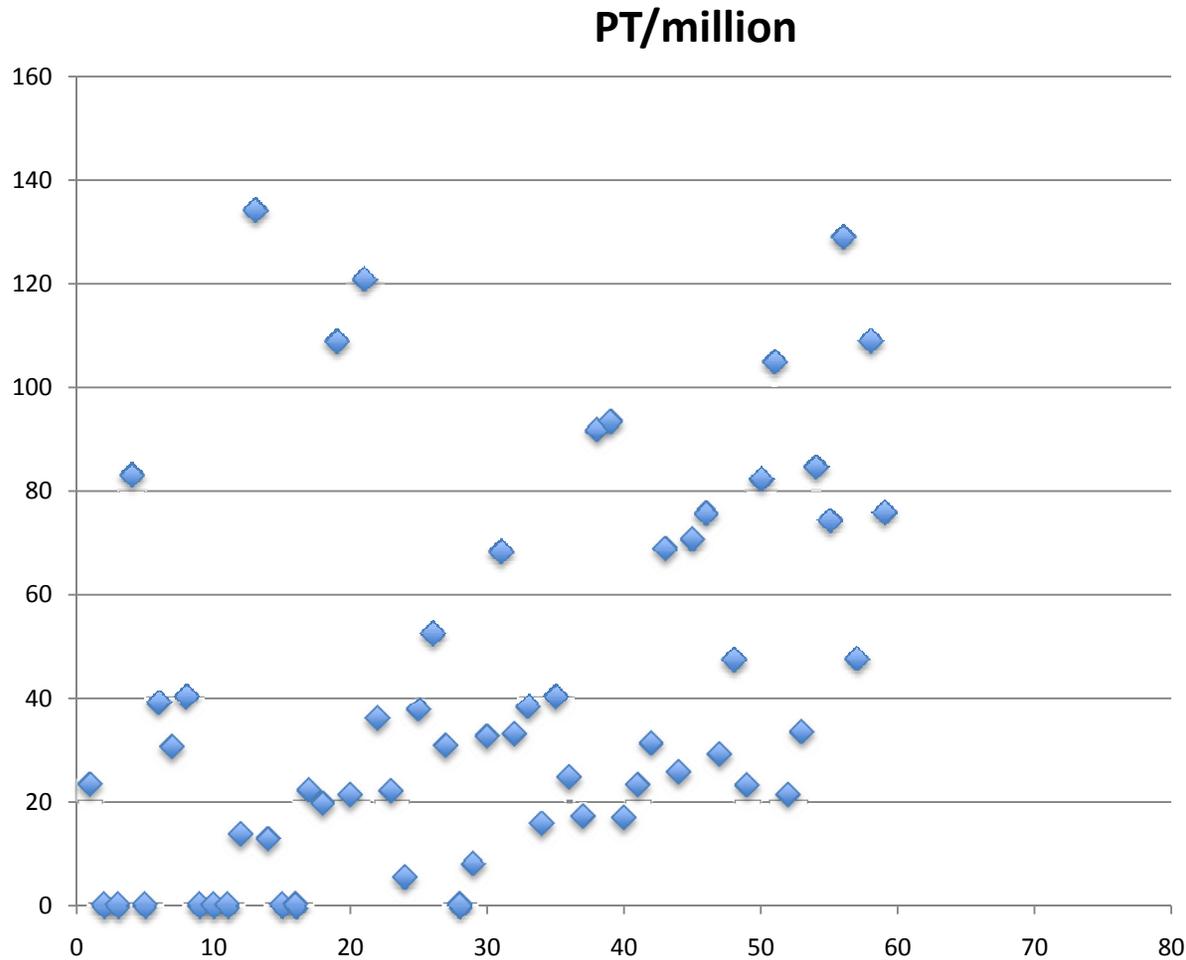
Minimum: 1.28 m

Maximum: 18.99 m

Ration of min to max

15.75

# Waitlist size by OPO (2009)



N= 50

Mean =

49.8/million

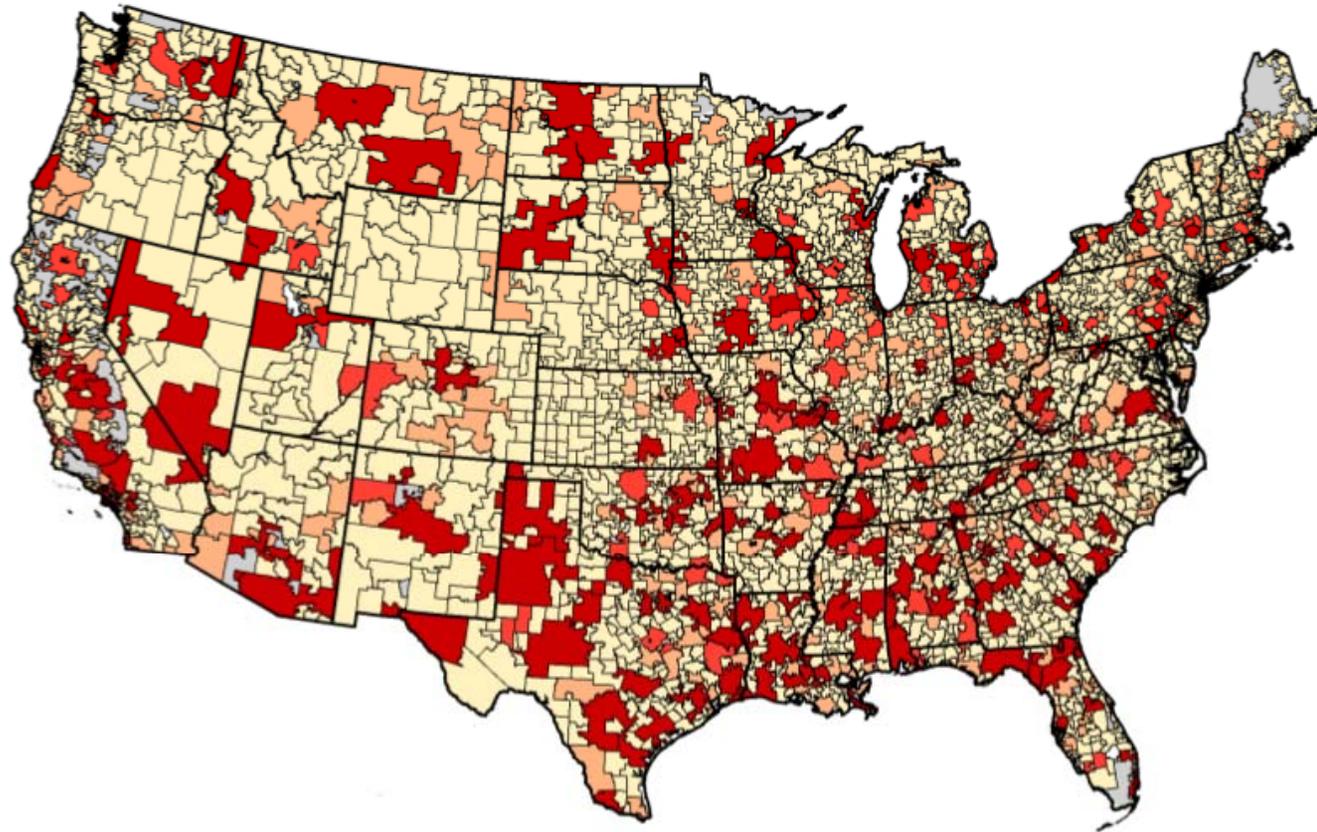
Minimum=5.25

Maximum=134.2

Ratio of smallest  
to biggest 25.5

◆ PT/million

# Medical geography does not equal either political geography or DSA's



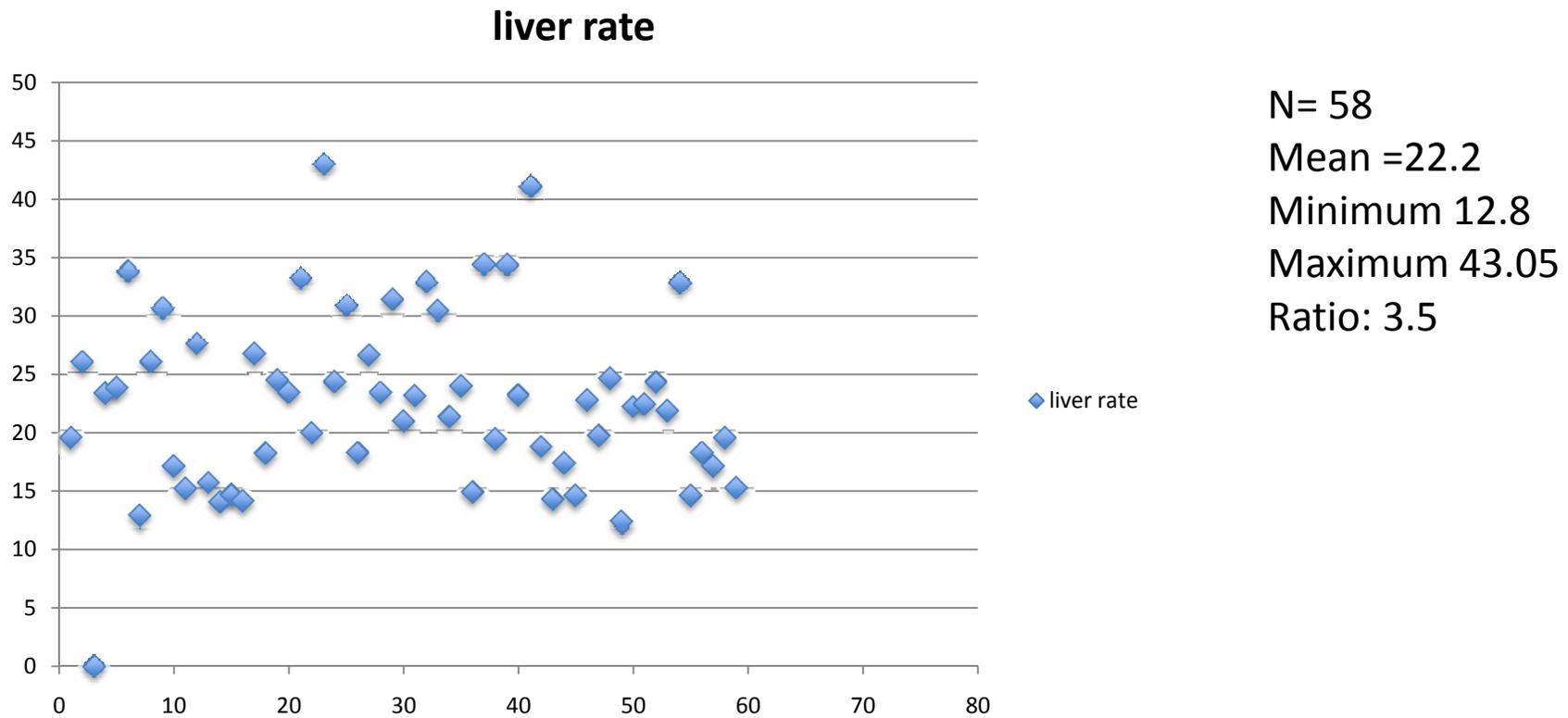
**Map B. Hospital Service Areas According to the Number of Acute Care Hospitals**

Thirty-nine percent of the population of the United States lived in areas with one hospital (buff); 15% lived in areas with two hospitals (light orange); 8.4% lived in areas with three hospitals (bright orange); and 37% of the population lived in areas with four or more hospitals within the hospital service area (red).

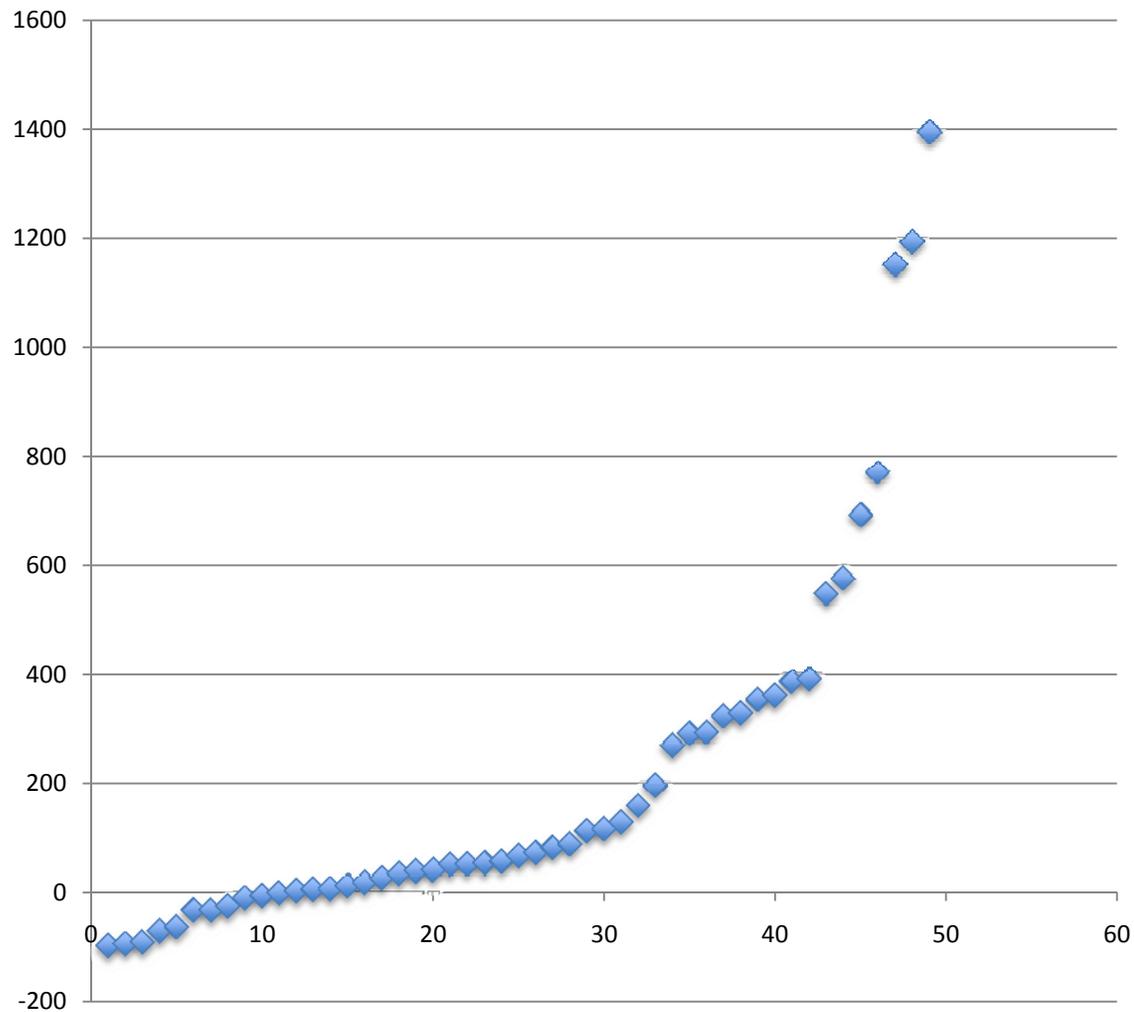
**Count of Acute Care Hospitals  
by Hospital Service Area (1993)**

■ 4 or more	(178 HSAs)
■ 3	(106)
■ 2	(322)
■ 1	(2,830)
■ Not Populated	

# Liver donation rate by OPO



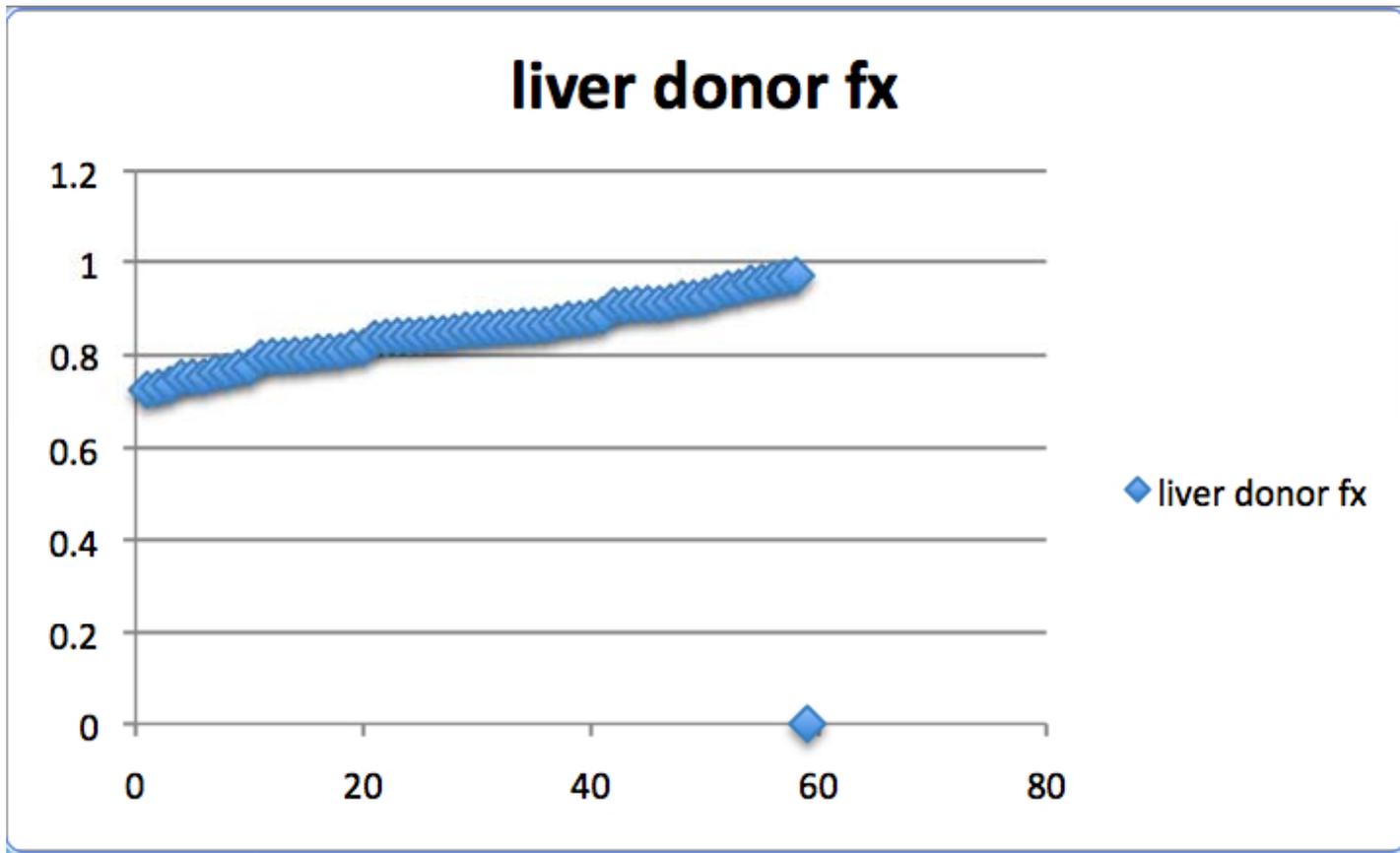
# Liver gap by allocation unit



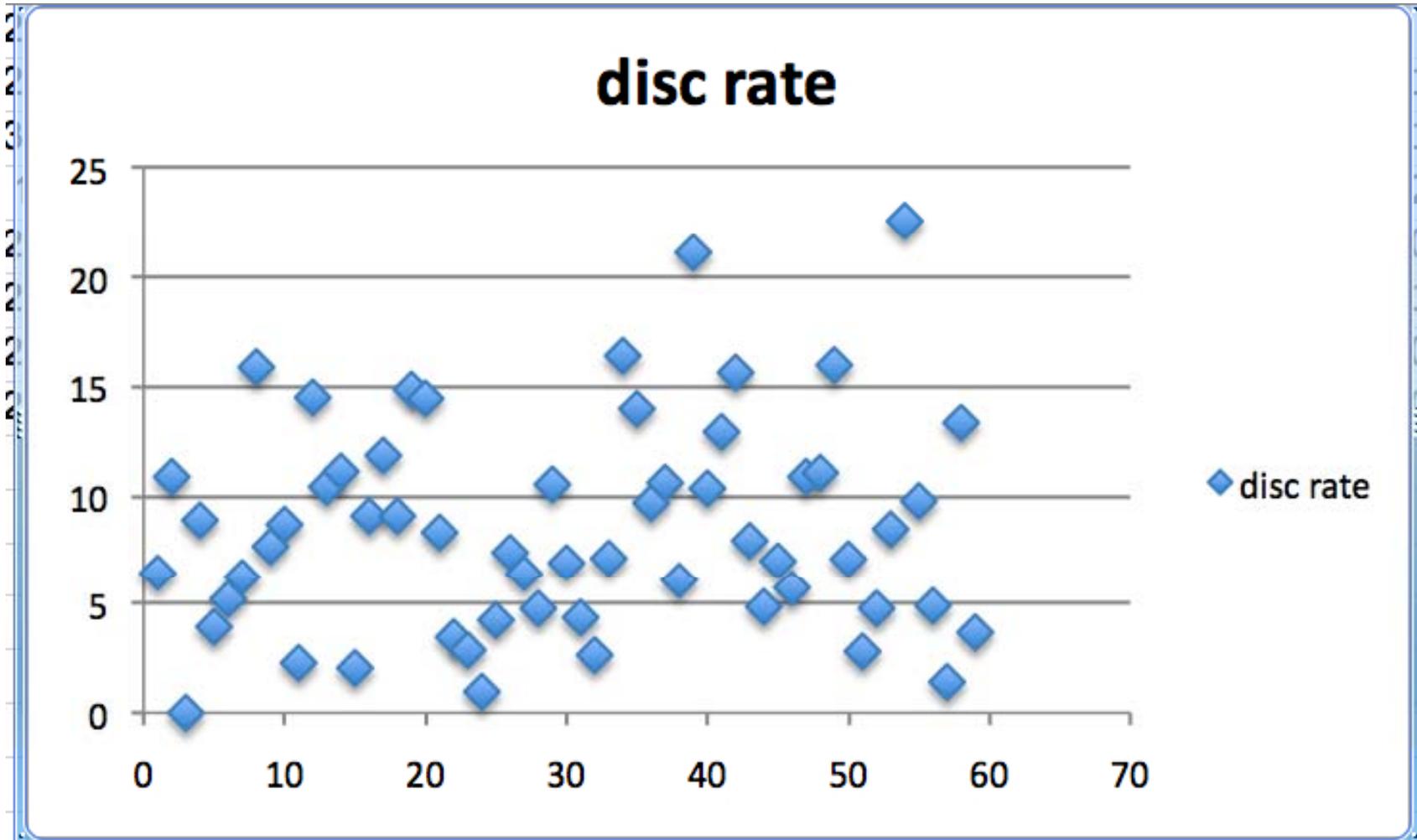
Minimum = -99  
Maximum = 1395

◆ Series1

# Livers procured per donor by allocation unit



# Liver discard rate not correlated with donor rate or waitlist rate



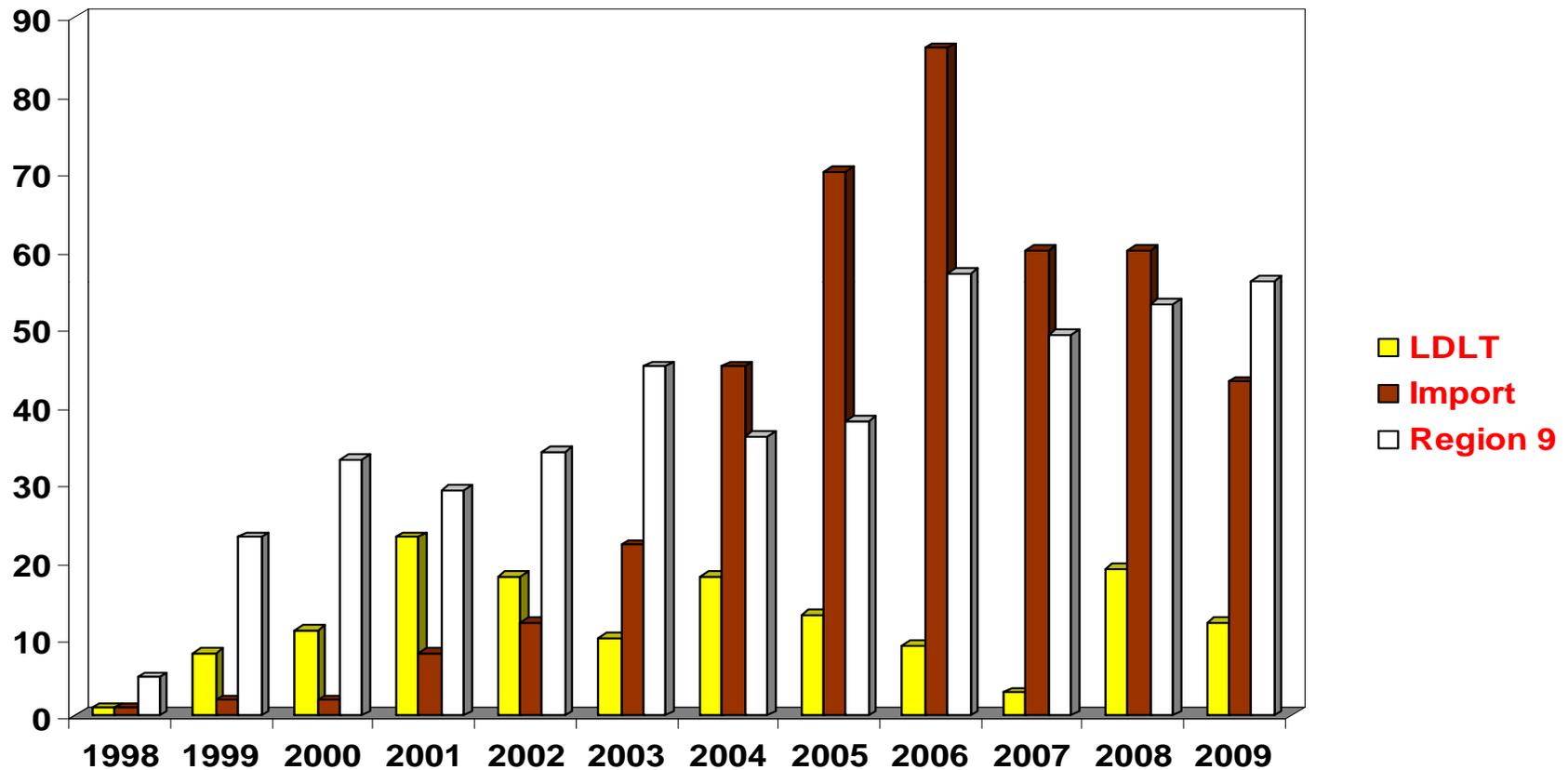
# Factors in discard

- Low incentive to use (small waitlist)
- Aggressive evaluation of high risk donors may increase discard rate
- Poor placement strategies/timing and cold ischemia
- Pre-donation biopsy
- Lack of commitment to use by recipient center
  - Centers rewarded for cherry picking

# Liver potential 2009

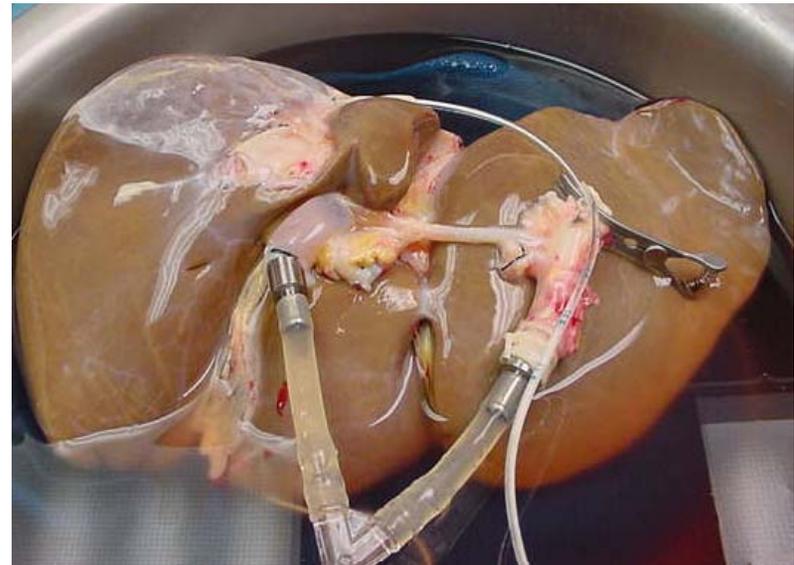
- Total donors 8022
- Total liver donors 6739
- Livers transplanted 6016
- Livers not transplanted 723
- Total net potential for better use and innovation: 2006

## ECD livers and living donors account for the majority of transplants since 2004 at NYP Hospital

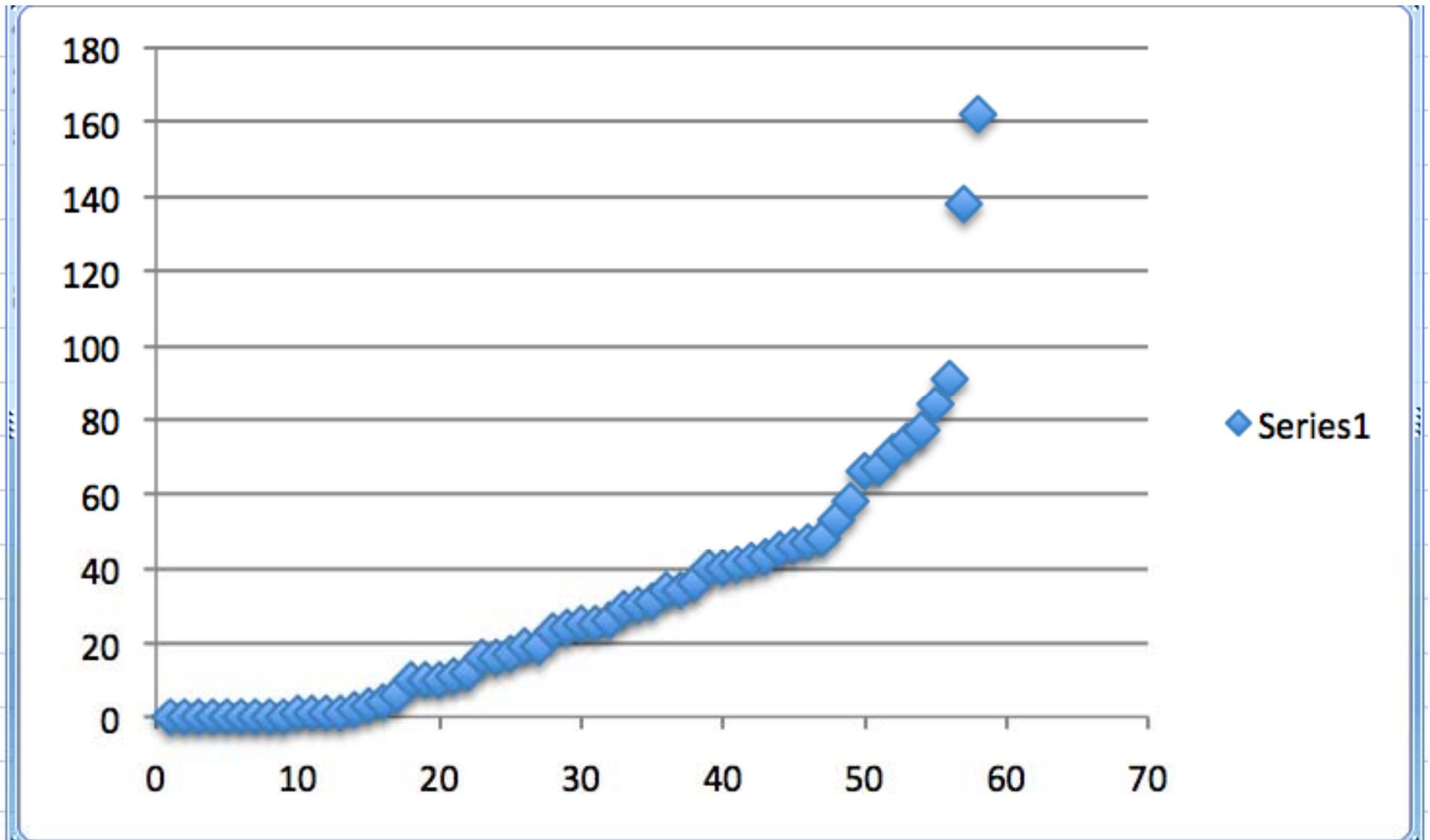


\*2009 volume is through 8/31/09

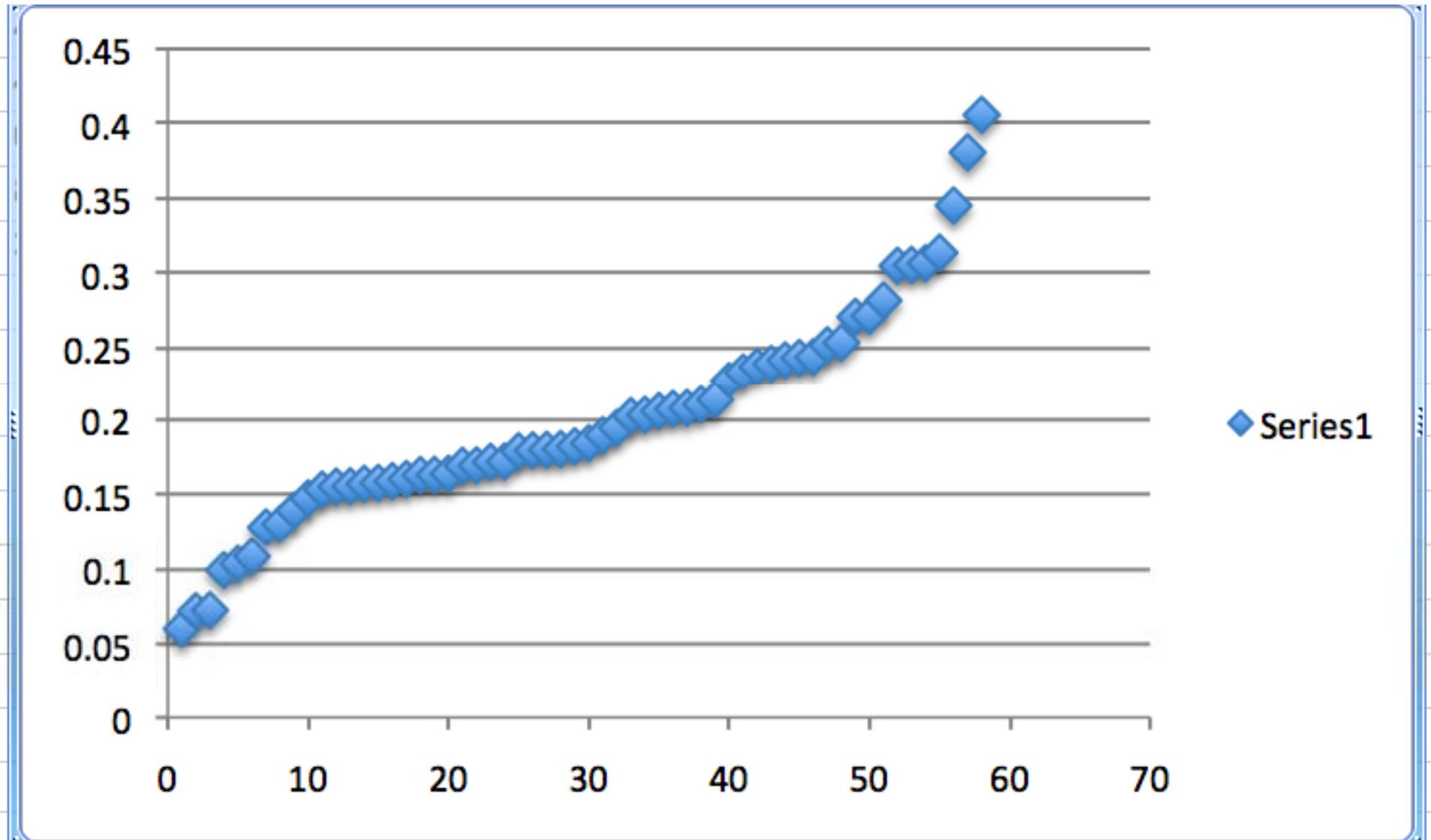
# Machine preservation of the human liver: Potential for selecting high risk grafts and Optimizing function: James Guarrera

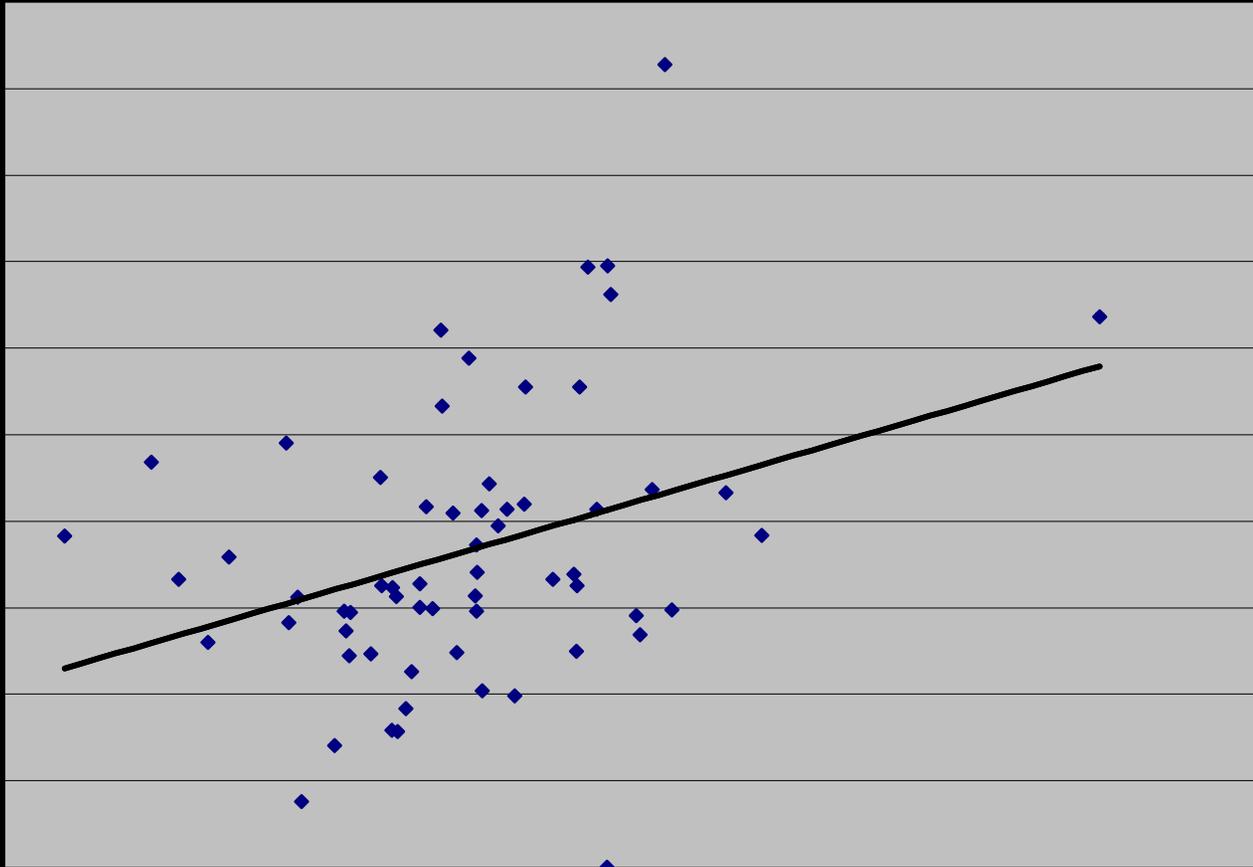


# Liver imports by OPO 2009



# Fraction of ECD by DSA: Not all donating populations are equal





### 1998 Cirrhosis Discharge vs. Death Rate

