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# Public Reporting of Transplant Program Outcomes Evaluations

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# Disclosures

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Sanofi/Genzyme: Consulting

My presentation does not include discussion of off-label or investigational use.

This work was supported wholly or in part by HRSA contract HHS-250-2015-00009C. The content is the responsibility of the authors alone and does not necessarily reflect the views or policies of the Department of HHS, nor does the mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government



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# SRTR Contract Task 3.9.1

The Contractor shall develop PSRs on the performance of transplant programs and organ procurement organizations (OPOs).

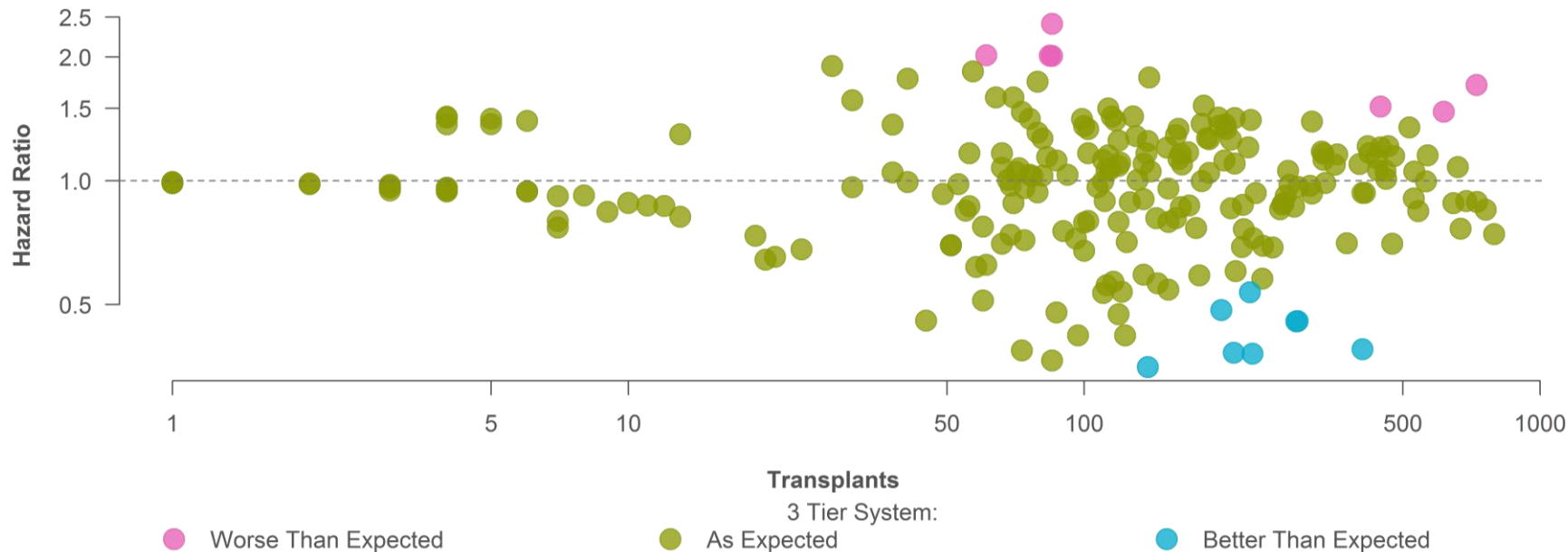
...explained, and organized as necessary to understand, interpret, and use the information accurately and efficiently.

...identify transplant programs and organ procurement organizations with better or worse outcomes.

# 3-Tier Outcome Assessment

				<u>Recipient Survival</u>									
				Living Donor		Deceased Donor							
<input type="checkbox"/>	AZ	Banner University Medical Center-Tucson, Tucson, AZ	175	15	AS EXPECTED	80	AS EXPECTED	0	N/A	0	N/A	<a href="#">Report</a>	
<input type="checkbox"/>	AZ	Banner-University Medical Center Phoenix, Phoenix, AZ	863	111	AS EXPECTED	183	AS EXPECTED	0	N/A	1	N/A	<a href="#">Report</a>	
<input type="checkbox"/>	AZ	Mayo Clinic Hospital, Phoenix, AZ	883	153	AS EXPECTED	449	HIGHER THAN EXPECTED	0	N/A	0	N/A	<a href="#">Report</a>	
<input type="checkbox"/>	IL	Loyola University Medical Center, Maywood, IL	439	41	AS EXPECTED	73	AS EXPECTED	1	N/A	2	N/A	<a href="#">Report</a>	
<input type="checkbox"/>	IL	Memorial Medical Center, Springfield, IL	152	15	AS EXPECTED	43	LOWER THAN EXPECTED	0	N/A	0	N/A	<a href="#">Report</a>	
<input type="checkbox"/>	IL	Northwestern Memorial Hospital, Chicago, IL	1199	227	AS EXPECTED	170	AS EXPECTED	0	N/A	0	N/A	<a href="#">Report</a>	

# 96% of Programs Are “As Expected” (kidney programs shown here)

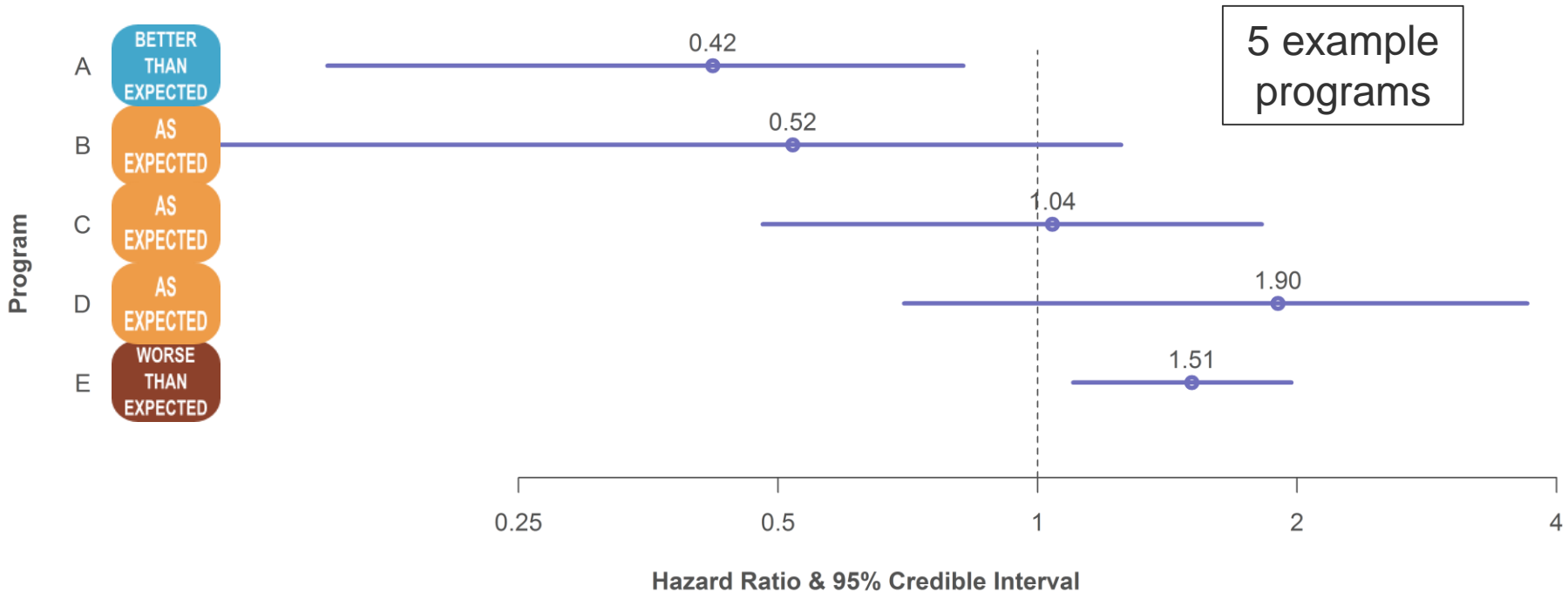


# Differentiation of Programs Under the 3-Tier System: January 2017 PSRs

Numbers of adult transplant programs in each of the 3-tier assessment system categories

Transplant type	Worse than Expected	As Expected	Better than Expected
Heart	1	121	1
Kidney	7	218	8
Liver	0	121	3
Lung	1	65	1


# Event Rates Vary 4-Fold within the “As Expected” Tier



# New Website Launched December 20, 2016



## FIND & COMPARE TRANSPLANT PROGRAMS

Select Organ 

Search by Postal Code or Program Name (optional)

SEARCH

ABOUT SRTR ▾

ABOUT THE DATA ▾

REPORTS & TOOLS ▾

NEWS & PUBLICATIONS ▾

REQUESTING SRTR DATA ▾

CONTACT US

**Last year, more than 33,600  
organ transplants were  
performed in the United States.**





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# New 5-Tier Search Results

Showing **7 results** for **kidney** transplant centers, **adult** patients , within **50 miles** of **60608**

NAME	DISTANCE	TRANSPLANT VOLUME	TRANSPLANT RATE	OUTCOME ASSESSMENT
<b>OUTCOME ASSESSMENT</b> The outcome assessment is a risk-adjusted assessment evaluating how often patients are alive with a functioning transplanted organ 1 year after transplant. Assessments range from 1 (worst) to 5 (best). The assessment is assigned after case-mix adjustment for the types of recipients who undergo transplant at the program and the donors used by the program. The program's outcomes are compared with outcomes for other programs in the country that perform similar types of transplants. Search results are sorted by adult outcome assessments by default, so programs with the best assessments appear at the top of the list. You can choose to view assessments for pediatric recipients from the Recipient drop-down list above; however, SRTTR may not evaluate outcomes for pediatric recipients if too few transplants are performed. Click <a href="#">here</a> for more information.				
<b>Rush University Medical Center</b> Chicago, IL <a href="#">View Summary Data</a> <a href="#">View Complete Report (PDF)</a> Also transplants Heart, Kidney-Pancreas, Liver, Pancreas	2.5 miles	<b>108</b> ADULTS	<b>22.2</b> PER 100 PEOPLE PER YEAR	<b>5</b>  BETTER THAN EXPECTED
<b>University of Chicago Medical Center</b> Chicago, IL <a href="#">View Summary Data</a> <a href="#">View Complete Report (PDF)</a> Also transplants Heart, Intestine, Kidney-Pancreas, Liver, Lung, Pancreas	5.9 miles	<b>64</b> ADULTS	<b>10.7</b> PER 100 PEOPLE PER YEAR	<b>5</b>  BETTER THAN EXPECTED

# AHRQ Recommendations for Public Reporting

Easier to  
understand

Reduces  
cognitive burden

Rank orders by  
performance

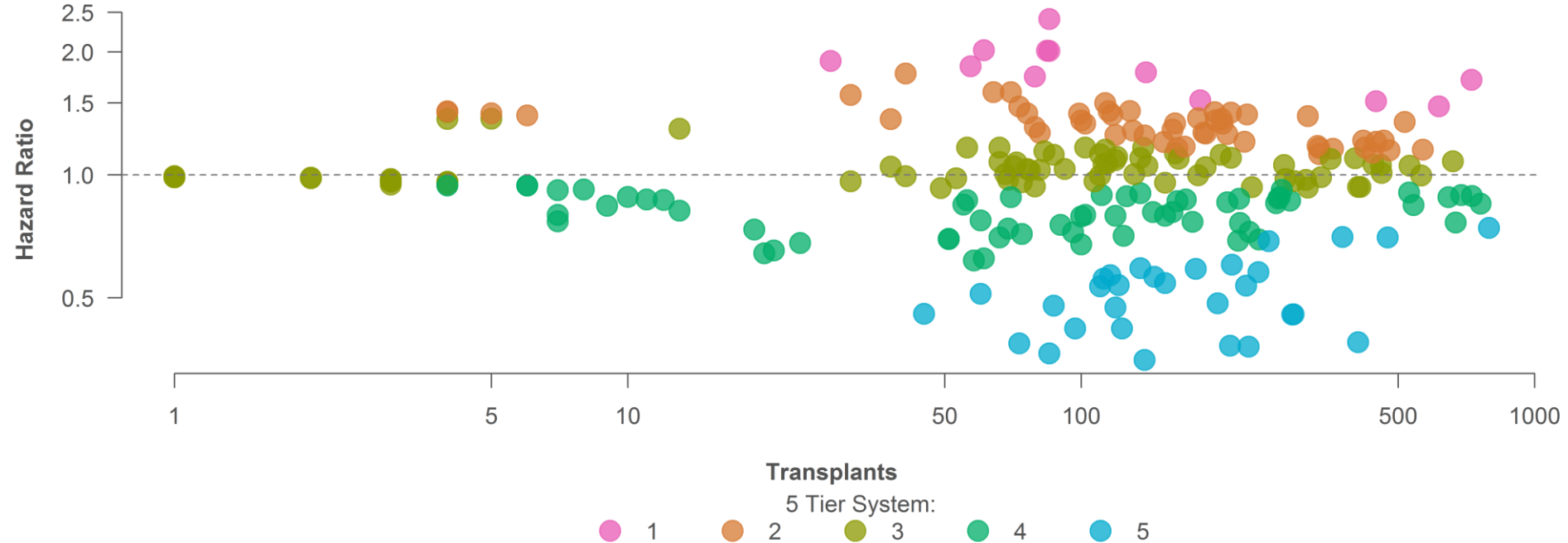
Uses symbols  
instead of  
numbers

Provides an  
overall summary  
measure

Includes few  
categories

Hibbard J, Sofaer S, AHRQ Publication No. 10-0082-EF, June 2010

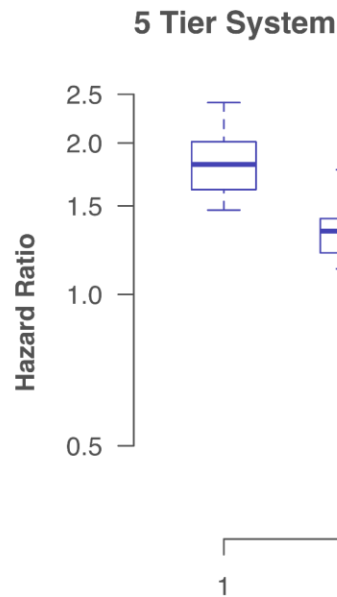
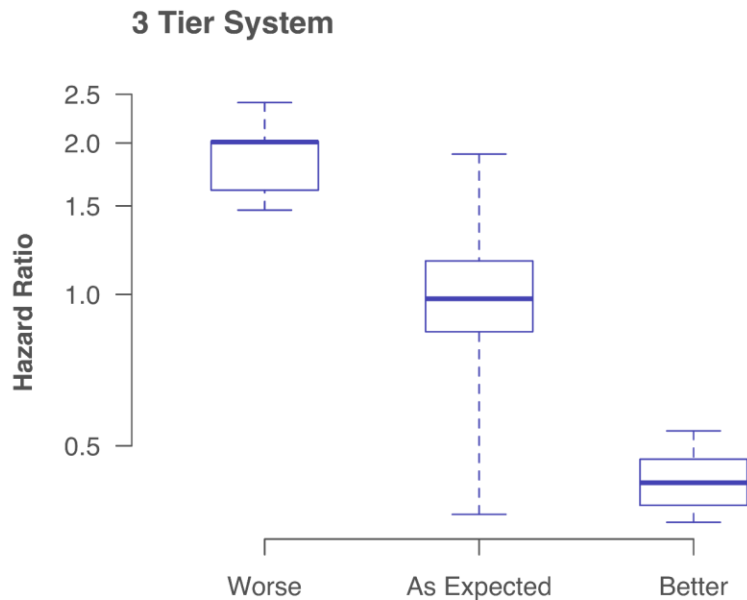
# Kidney Program Evaluations in 5-Tiers



# Differentiation Under the 5-Tier System

Transplant Type	Tier 1 (Worse than Expected)	Tier 2 (Somewhat Worse than Expected)	Tier 3 (Good, As Expected)	Tier 4 (Somewhat Better than Expected)	Tier 5 (Better than Expected)
Heart	8	16	44	47	8
Kidney	12	52	78	61	30
Liver	5	32	40	37	10
Lung	3	17	22	20	5

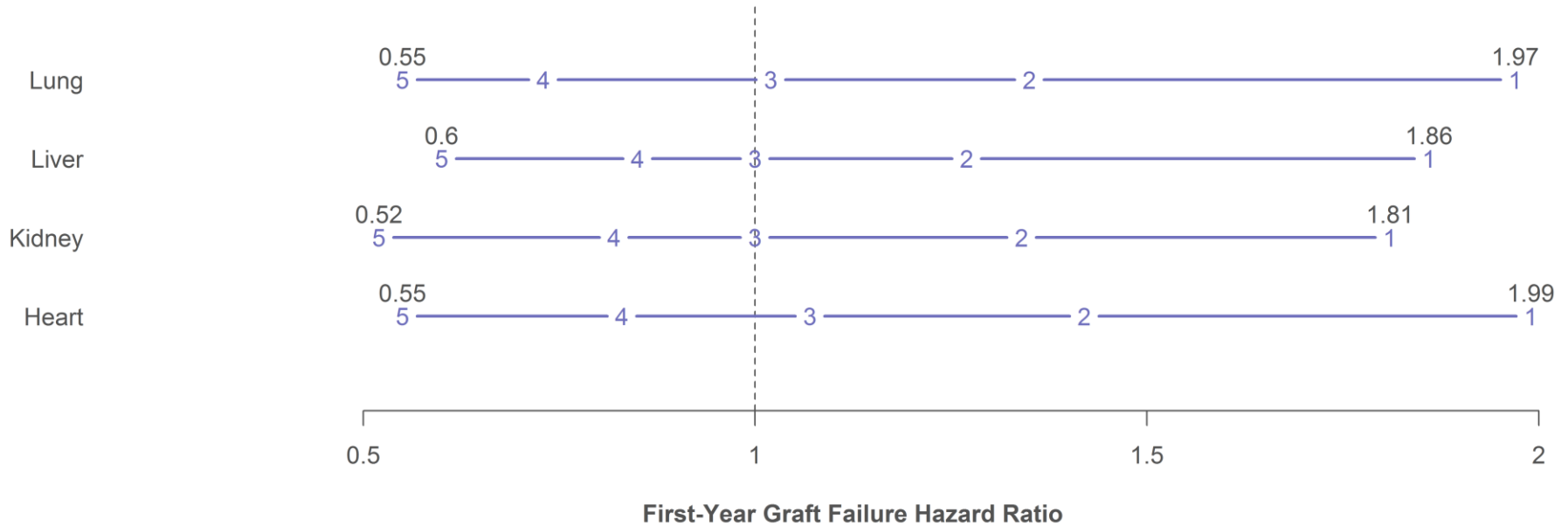
# Program Outcome Variation in 3- versus 5-Tier Systems



# Differences in Graft Failure Rates across 5 Tiers

Tier	Average First-Year Transplant Failure Rate			
	Heart	Kidney	Liver	Lung
5 (better than expected)	5.5%	2.6%	6.4%	7.5%
4 (somewhat better than expected)	8.2%	4.1%	9.0%	9.9%
3 (good, as expected)	10.4%	5.0%	10.4%	13.4%
2 (somewhat worse than expected)	13.6%	6.6%	13.1%	17.4%
1 (worse than expected)	18.5%	8.8%	18.6%	24.4%

# 4-Fold Variation in Graft Failure Rates across Tiers



# Sampling of Positive Feedback Received Regarding the 5-Tier System

- I am a kidney patient in need of a transplant. Last month when I looked up SRTR website, I got a clear idea where to go for my kidney transplant. Researching the same subject now with SRTR changing back to 3 tier system, I am confused where to go for transplant as almost all programs are rated as performing as expected. Please change rating back to 5 tier system if SRTR is really there to keep patients informed and help them choose a transplant center.
- It's devilishly hard to satisfy all stakeholders when making comparisons. I hope patient needs are top of mind in vetting of 5-tier system.
- I am a patient trying to get a kidney transplant. I have seen reporting by SRTR using 3-tier and 5-tier systems in the last month. 3-tier system is useless for patients like me, please change back to 5-tier system.
- I am the parent of a future kidney transplant recipient. The five-tier is a lot better than the three-tier, even if it is not tailored to finding information on pediatric programs.



# Critical comments received:

- Focuses too much attention on the first-year outcomes, when undergoing transplant at all is more important.
- Patients often do not have a choice of where to undergo transplant due to geographic or payer constraints; ratings only cause anxiety.
- Differences are not clinically meaningful or statistically significant.
- Too inaccurate due to lack of data on risk factors.
- Ratings will cause programs to decline patients or donors with higher risk profiles, limiting access for patients.

# Differences in Outcomes are Statistically Significantly Different Across the Tiers.

TIER*	1	2	3	4	5
1	1.00 (p=NA)	0.73 (p=0.00009)	0.57 (p<0.00001)	0.43 (p<0.00001)	0.25 (p<0.00001)
2	1.37 (p=0.00009)	1.00 (p=NA)	0.78 (p=0.00002)	0.58 (p<0.00001)	0.34 (p<0.00001)
3	1.75 (p<0.00001)	1.28 (p=0.00002)	1.00 (p=NA)	0.75 (p=0.00002)	0.44 (p<0.00001)
4	2.34 (p<0.00001)	1.72 (p<0.00001)	1.34 (p=0.00002)	1.00 (p=NA)	0.58 (p<0.00001)
5	4.02 (p<0.00001)	2.95 (p<0.00001)	2.30 (p<0.00001)	1.72 (p<0.00001)	1.00 (p=NA)

\*Each cell contains the hazard ratio for graft failure for transplant patients in the column tier vs. the row tier (p-value).

# Path forward:

- Public comment review by the SRTR Visiting Committee on May 9, 2017.
- Recommendations to HRSA following SRTR Visiting Committee meeting.
- HRSA will decide what action to take.
- AHRQ-funded project continues to explore:
  - Randomized trials to test patient comprehension.
  - Alternative outcomes that are most meaningful to patients.
  - Patient focus groups to gather feedback.



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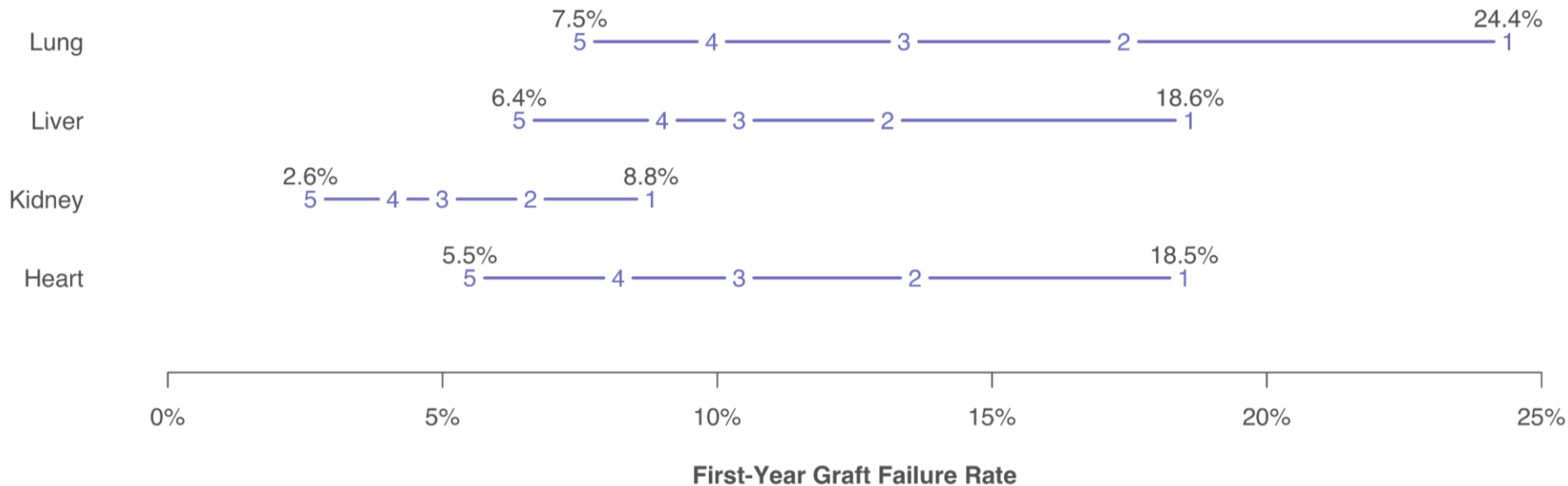
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# Absolute Graft Failure Rates within Tiers



# Difference in Relative Graft Failure Rates Across the 5 Tiers

Tier	Median Hazard Ratio for First-Year Transplant Failure			
	Heart	Kidney	Liver	Lung
5 (better than expected)	0.55	0.52	0.60	0.55
4 (somewhat better than expected)	0.83	0.82	0.85	0.73
3 (good, as expected)	1.07	1.00	1.00	1.02
2 (somewhat worse than expected)	1.42	1.34	1.27	1.35
1 (worse than expected)	1.99	1.81	1.86	1.97





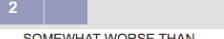
# What is the probability that programs in higher tiers are actually better?

The probability that a program in the column tier has truly better outcomes than a program in the row tier (derived from simulation studies):	Tier 5	Tier 4	Tier 3	Tier 2
Tier 4	0.72			
Tier 3	0.81	0.63		
Tier 2	0.91	0.78	0.66	
Tier 1	0.98	0.92	0.86	0.75

# AHRQ Survey Findings: Using Tiers for Transplant Rate



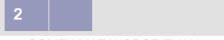





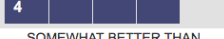
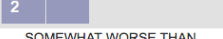
## Transplant Center Search Results

Centers may vary in rates of complications and wait times. [Learn](#)

	Distance	Transplant Rate	Outcome Assessment
The outcome assessment tells you if the program's 1-year survival after transplant is better, worse, or about the same as what is expected for that program. This is determined by comparing the survival for patients at each center with similar patients nationally.			
Meadow Hospital	92 miles	<b>13.4</b> PER 100 PEOPLE PER YEAR	4  SOMEWHAT BETTER THAN EXPECTED
Forest Hospital	120 miles	<b>8.5</b> PER 100 PEOPLE PER YEAR	4  SOMEWHAT BETTER THAN EXPECTED
Lake Hospital	15 miles	<b>32.3</b> PER 100 PEOPLE PER YEAR	3  GOOD (AS EXPECTED)
River Hospital	4 miles	<b>12.6</b> PER 100 PEOPLE PER YEAR	3  GOOD (AS EXPECTED)
Alpine Hospital	40 miles	<b>15.7</b> PER 100 PEOPLE PER YEAR	2  SOMEWHAT WORSE THAN EXPECTED

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Meadow Hospital	92 miles	3  GOOD (AS EXPECTED)	4  SOMEWHAT BETTER THAN EXPECTED
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River Hospital	4 miles	3  GOOD (AS EXPECTED)	3  GOOD (AS EXPECTED)
Alpine Hospital	40 miles	4  SOMEWHAT BETTER THAN EXPECTED	2  SOMEWHAT WORSE THAN EXPECTED

26% choose Lake with numerical rate vs. 45% with tiers ( $P < 0.001$ )



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