

# KIPA2023\_01 Allocation Simulation Analysis Report

## Addendum

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**Date:**

August 30, 2023

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**Data Request ID:**

KIPA2023\_01

**Timeline:**

Committee met: March 14, 2023

Request made: March 28, 2023

Analysis plan submitted: April 11, 2023

Analysis report submitted: July 11, 2023

## BACKGROUND

The OPTN Kidney and Pancreas Committees are currently working on adopting the continuous distribution framework for kidney, pancreas, kidney-pancreas, and pancreas islet allocation. At the March 14, 2023, OPTN Kidney Committee meeting, the committee requested simulations for four different scenarios, plus current rules; at the March 6, 2023, OPTN Pancreas Committee meeting, the committee requested four different scenarios for pancreas and kidney-pancreas allocation. Each model, a run of the Organ Allocation Simulation software, represents a different set of weights for each of the attributes that will define continuous distribution.

Following submission of the initial report, additional results were requested in July 2023.

## REQUEST

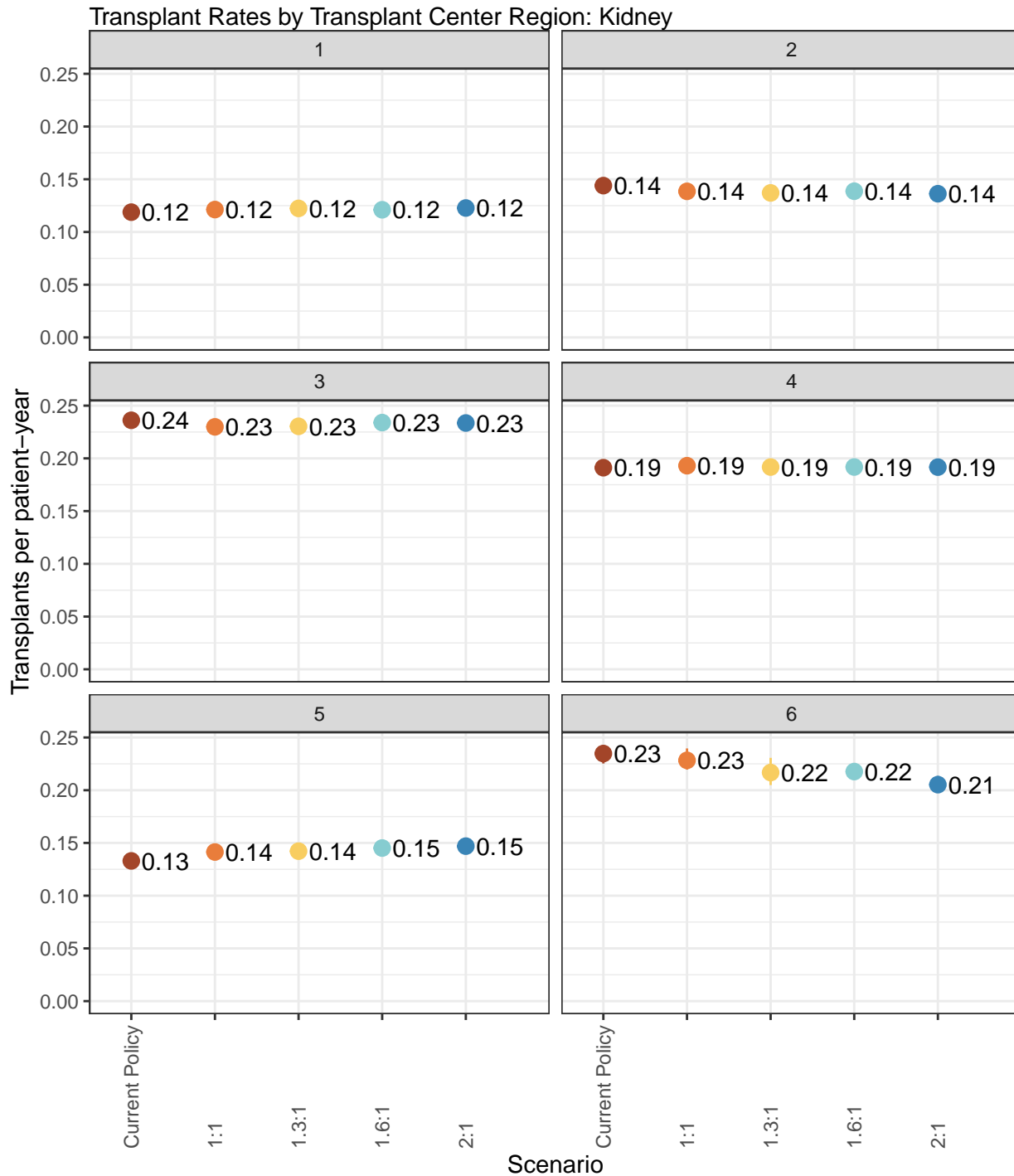
### **Additional results for simulation runs for 4 continuous distribution scenarios**

Additional results figures are requested from the OASIM simulation scenarios and the simulation of current rules described in the previous request: KIPA2023\_01 Allocation Simulation Data Request. The additional requested figures are included below and will be included for current allocation and the 4 continuous distribution scenarios:

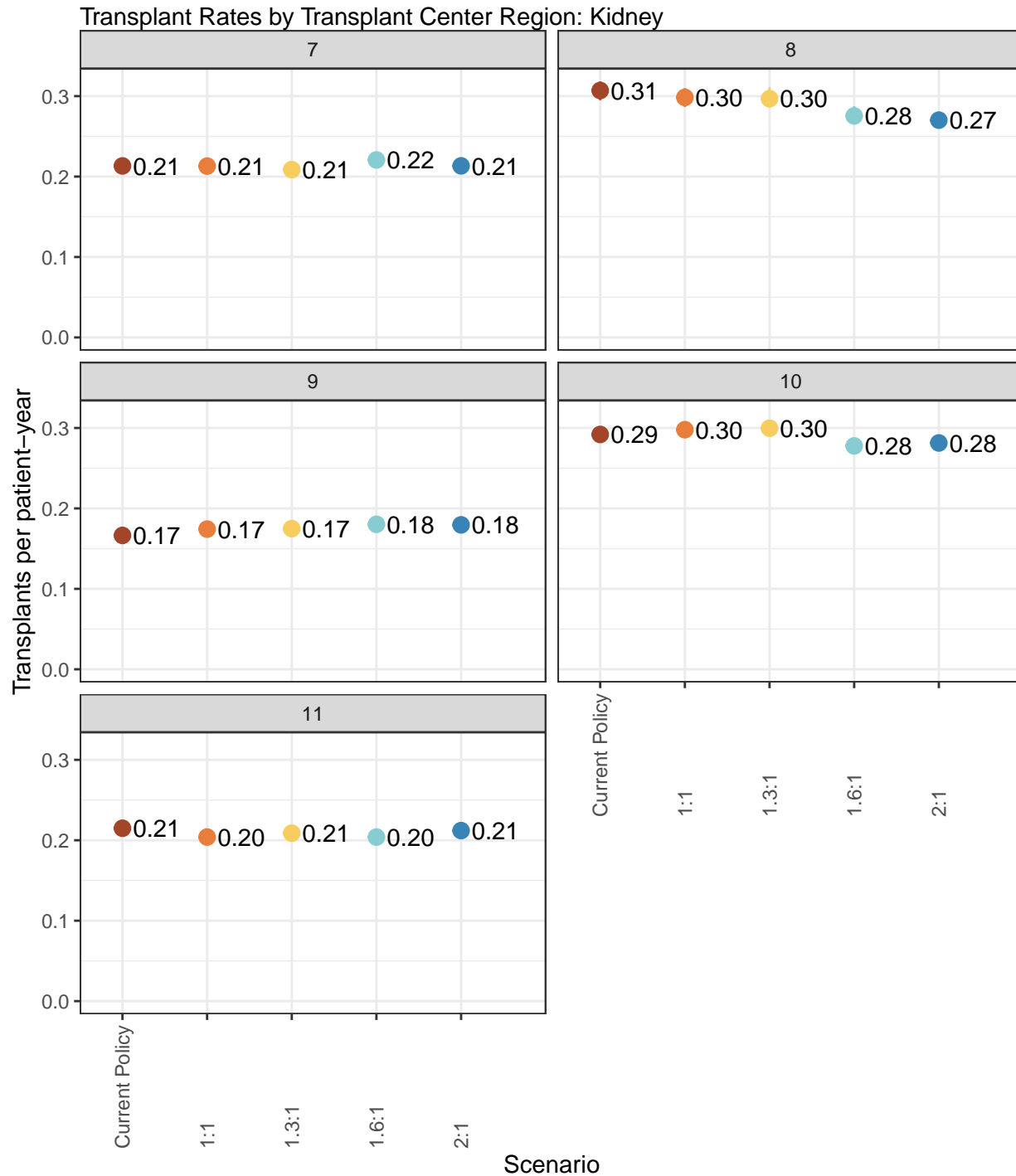
1. Kidney transplant rate by OPTN region
2. Median qualifying time at transplant by waitlist organ
3. Median KDPI by EPTS
4. Percent of kidney recipients by DR mismatches (0, 1, or 2)
5. Percent of pancreas and kidney-pancreas recipients by DR mismatches (0, 1, or 2)

## SIMULATED RESULTS

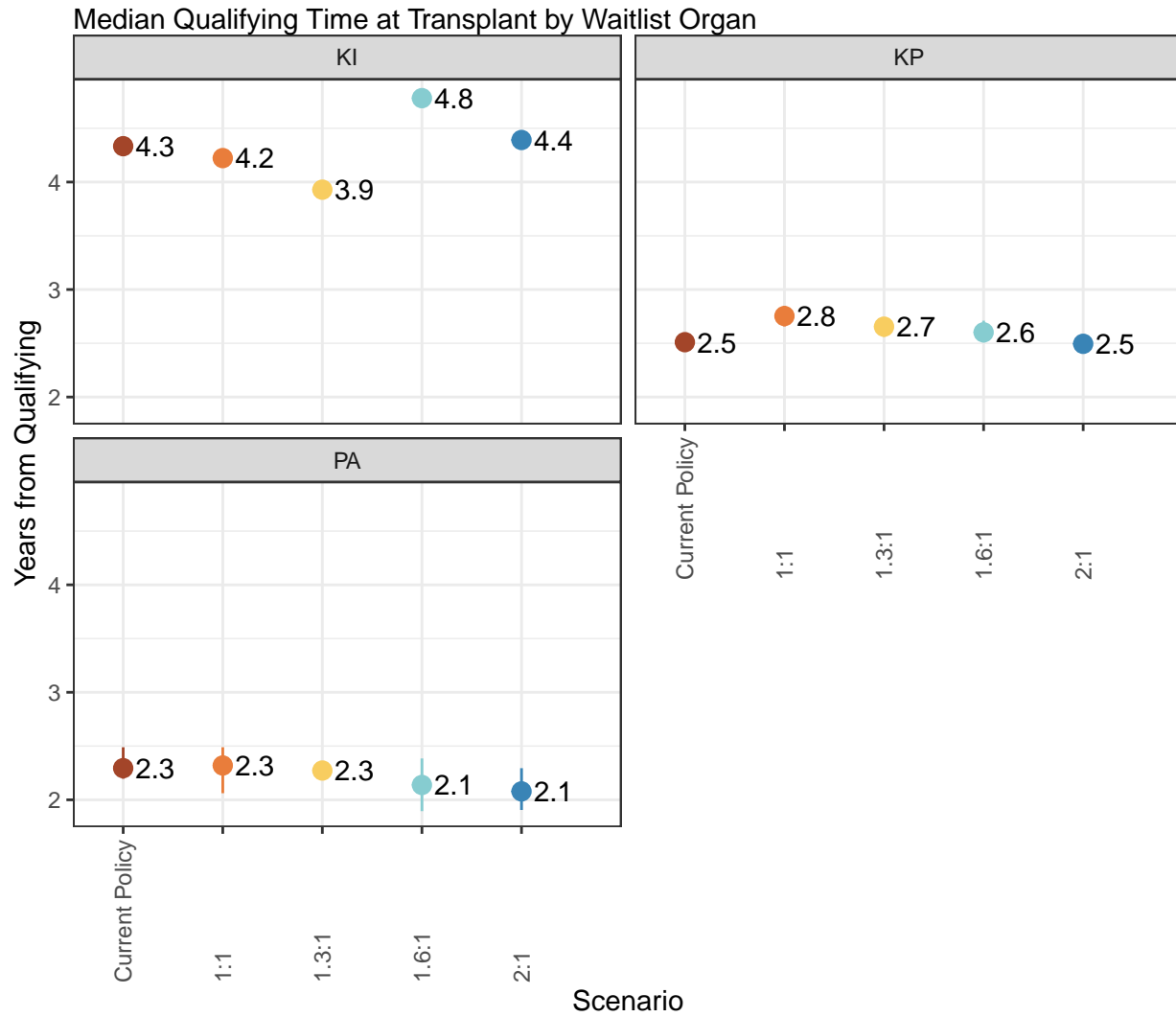
All results presented in this report represent the mean value for a given metric across the 10 iterations; each metric is calculated at the scenario/iteration level and the mean across iterations is calculated to apply to the scenario; the minimum and maximum across iterations are also presented as error bars in figures and as a range in tables.



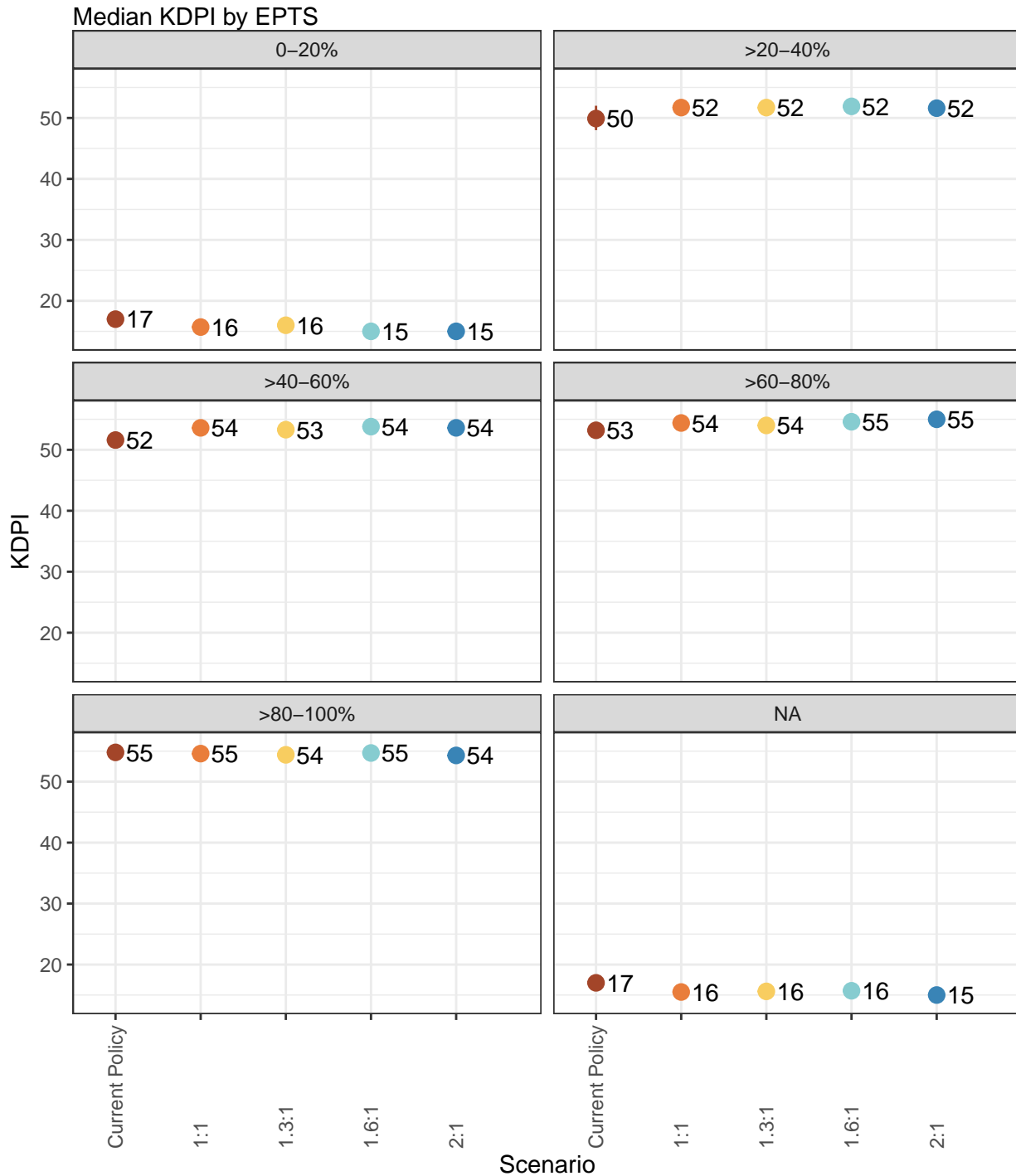
**Figure 104:** Transplant Rates by Transplant Center Region: Kidney. Person-time is calculated in days for all candidates from the start of their simulation period (simulation start or listing) to transplant, waitlist removal, or simulation end. OPTN regions numbers 1 to 6.



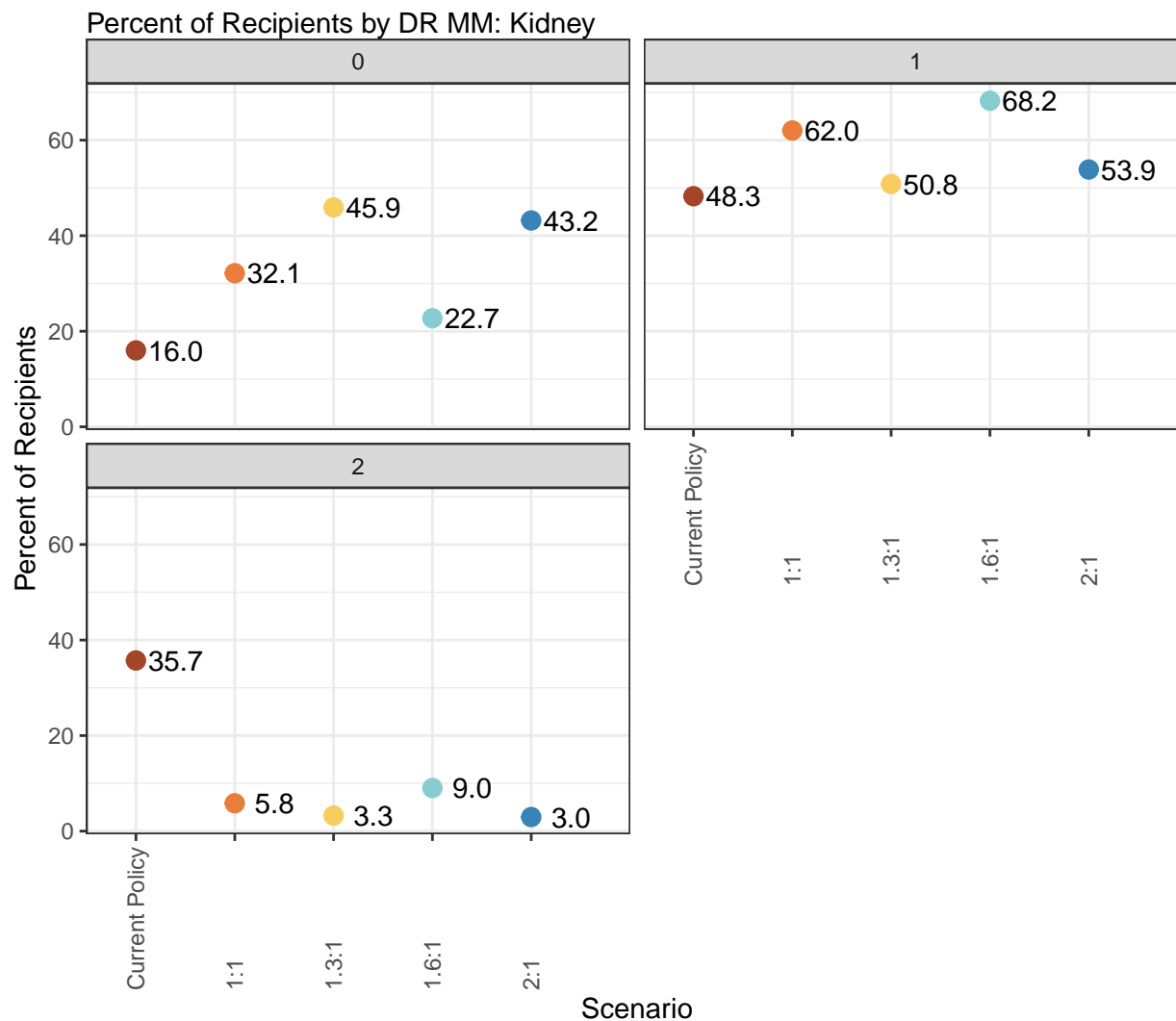
**Figure 105:** Transplant Rates by Transplant Center Region: Kidney. Person-time is calculated in days for all candidates from the start of their simulation period (simulation start or listing) to transplant, waitlist removal, or simulation end. OPTN regions numbers 7 to 11.



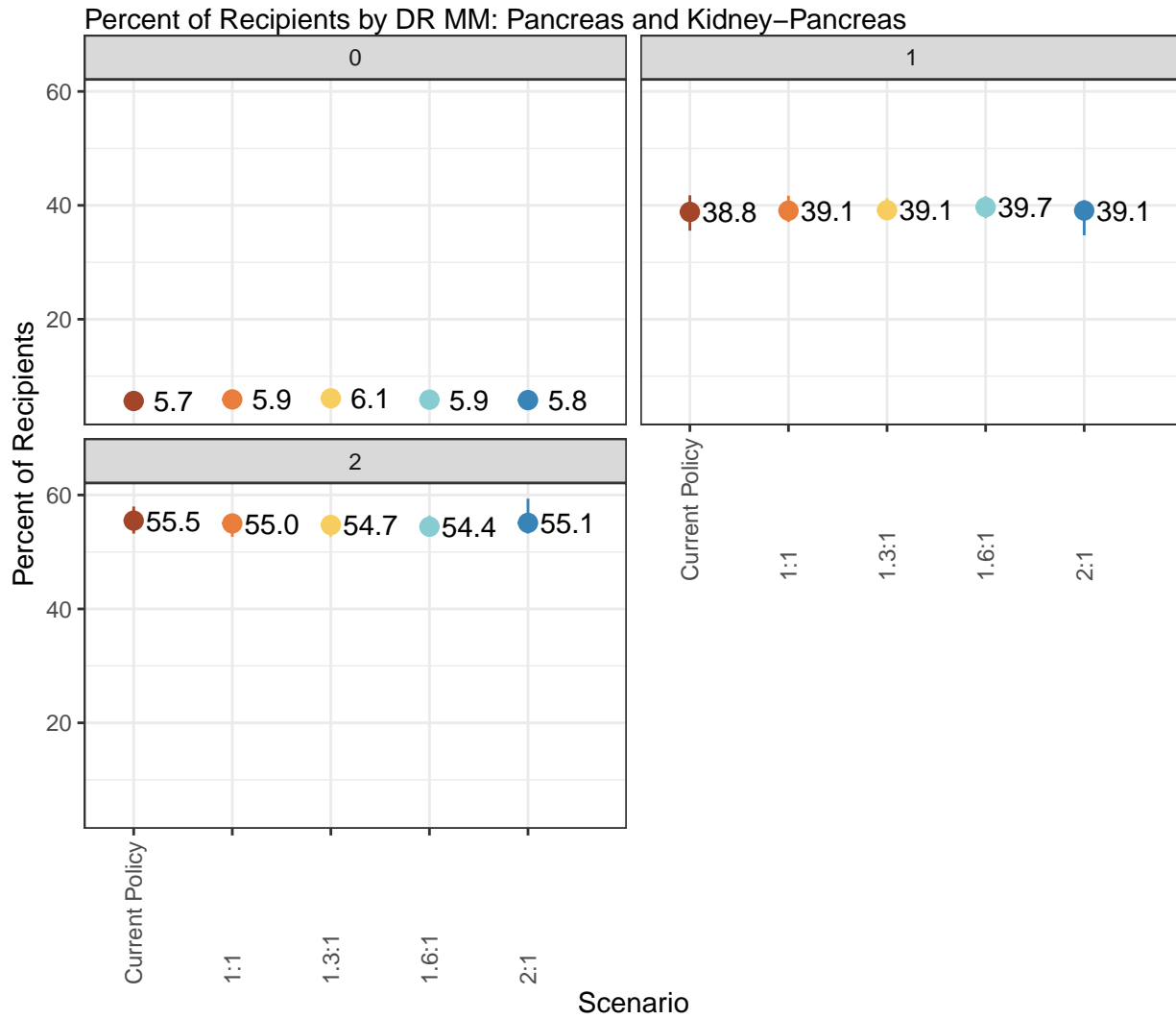
**Figure 106:** Median Qualifying Time at Transplant by Waitlist Organ. Median time in years from qualifying date to transplant among those who underwent transplant.



**Figure 107:** Median KDPI by EPTS. Median KDPI.



**Figure 108:** Percent of Recipients by DR MM: Kidney. HLA-DR mismatches as defined under the current OPTN policy definitions for matched antigens.



**Figure 109:** Percent of Recipients by DR MM: Pancreas and Kidney-Pancreas. HLA-DR mismatches as defined under the current OPTN policy definitions for matched antigens.