

Supplementary Material

Supplemental Appendix S1. SF-12 Health Survey.

This survey asks for your views about your health. This information will help keep track of how you feel and how well you are able to do your usual activities. Answer each question by choosing just one answer. If you are unsure how to answer a question, please give the best answer you can. Your responses will be kept confidential.

1. In general, would you say your health is:

- Excellent Very good Good Fair Poor

The following questions are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

2. Moderate activities such as moving a table, pushing vacuum cleaner, bowling, or playing golf.

- YES, limited a lot YES, limited a little NO, not limited at all

3. Climbing several flights of stairs.

- YES, limited a lot YES, limited a little NO, not limited at all

During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

- | | YES | NO |
|--|--------------------------|--------------------------|
| 4. Accomplished less than you would like. | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Were limited in the kind of work or other activities. | <input type="checkbox"/> | <input type="checkbox"/> |

During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

- | | YES | NO |
|--|--------------------------|--------------------------|
| 6. Accomplished less than you would like. | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Did work or activities less carefully than usual. | <input type="checkbox"/> | <input type="checkbox"/> |

8. During the past 4 weeks, how much did pain interfere with your normal work (including work outside the home and housework)?

- Not at all A little bit Moderately Quite a bit Extremely

These questions are about how you have been feeling during the past 4 weeks.

For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks...

9. Have you felt calm & peaceful?

All of the time Most of the time Some of the time A little of the time None of the time

10. Did you have a lot of energy?

All of the time Most of the time Some of the time A little of the time None of the time

11. Have you felt down-hearted and blue?

All of the time Most of the time Some of the time A little of the time None of the time

12. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives, etc.)

All of the time Most of the time Some of the time A little of the time None of the time

Supplemental Appendix S2. Non-invasive Rejection Surveillance Survey.

This is a survey to determine if blood plasma testing can replace heart biopsies for cardiac transplant recipients. The purpose of the study is to assess how non-invasive rejection surveillance can impact quality of life and patient satisfaction at the University Health Network, and to determine knowledge gaps. All surveys are anonymous.

How far are you from your transplant? _____ years, _____ months

1. Have you previously had gene expression profiling (AlloMap[®]) testing as part of your rejection monitoring?

- a. Yes
- b. No

2. On average, many heart biopsies have you had for rejection monitoring ?

- a. 0-5
- b. 5-10
- c. 10-15
- d. greater than 15

3. Have you had any complications as a result of your routine biopsies?

- a. Yes
- b. No
- c. Don't know

4. On a scale of 0 to 10, rate your level of anxiety before a biopsy from 0 (No Anxiety) and 10 (High level of anxiety)? *Please circle the appropriate number*

Anxiety level:

0	1	2	3	4	5	6	7	8	9	10
Minimal Anxiety			Moderate Anxiety				High Anxiety			

5. On a scale of 0 to 10, rate your level of anxiety before having HeartCare[®] (AlloMap[®]/AlloSure[®]) drawn from 0 (No Anxiety) and 10 (High level of anxiety)? *Please circle the appropriate number*

Anxiety level:

0	1	2	3	4	5	6	7	8	9	10
Minimal Anxiety			Moderate Anxiety				High Anxiety			

6. Do you feel that the cell-free DNA (AlloSure®) testing improved the quality of care?

a. Yes

b. If No, why not? _____

Please rate your satisfaction with the following aspects of your care:

0	1	2	3	4	5	6	7	8	9	10
Very dissatisfied			Dissatisfied		Neutral	Satisfied		Very Satisfied		

Your overall experience:

0	1	2	3	4	5	6	7	8	9	10
Very dissatisfied			Dissatisfied		Neutral	Satisfied		Very Satisfied		

Pain control during the experience:

0	1	2	3	4	5	6	7	8	9	10
Very dissatisfied			Dissatisfied		Neutral	Satisfied		Very Satisfied		

Pain control compared to a heart biopsy:

0	1	2	3	4	5	6	7	8	9	10
Very dissatisfied			Dissatisfied		Neutral	Satisfied		Very Satisfied		

Time it took to perform the procedure:

0	1	2	3	4	5	6	7	8	9	10
Very dissatisfied			Dissatisfied		Neutral	Satisfied		Very Satisfied		

Using blood sample to monitor rejection surveillance:

0	1	2	3	4	5	6	7	8	9	10
Very dissatisfied			Dissatisfied		Neutral	Satisfied		Very Satisfied		

Using blood sample (cell-free DNA) to monitor rejection surveillance instead of biopsies:

0	1	2	3	4	5	6	7	8	9	10
Very dissatisfied			Dissatisfied		Neutral	Satisfied		Very Satisfied		

Please Comment:

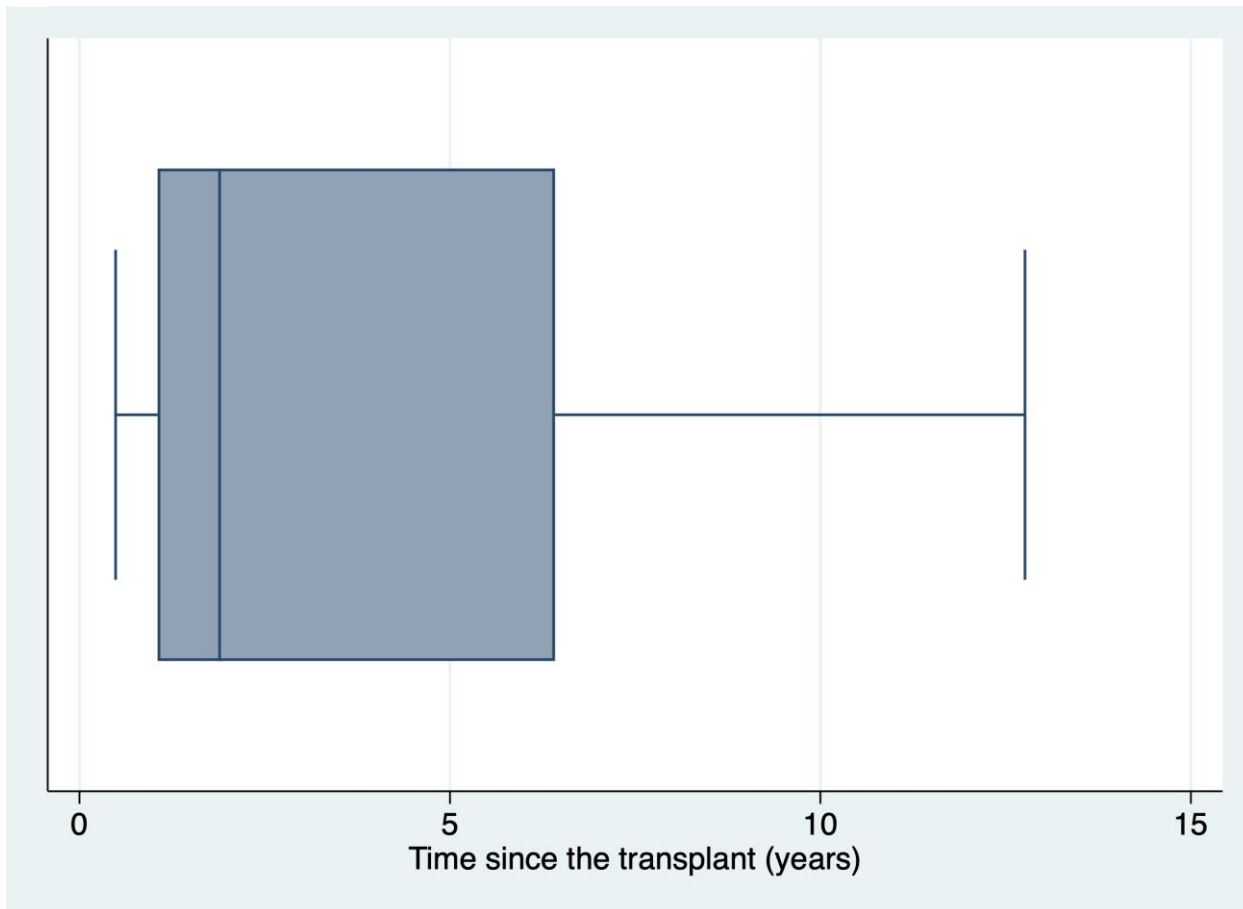
Please tell us what went well with this experience?

Please tell us what we could improve with this procedure experience

Do you have any feedback about your experience with the cell-free DNA test?

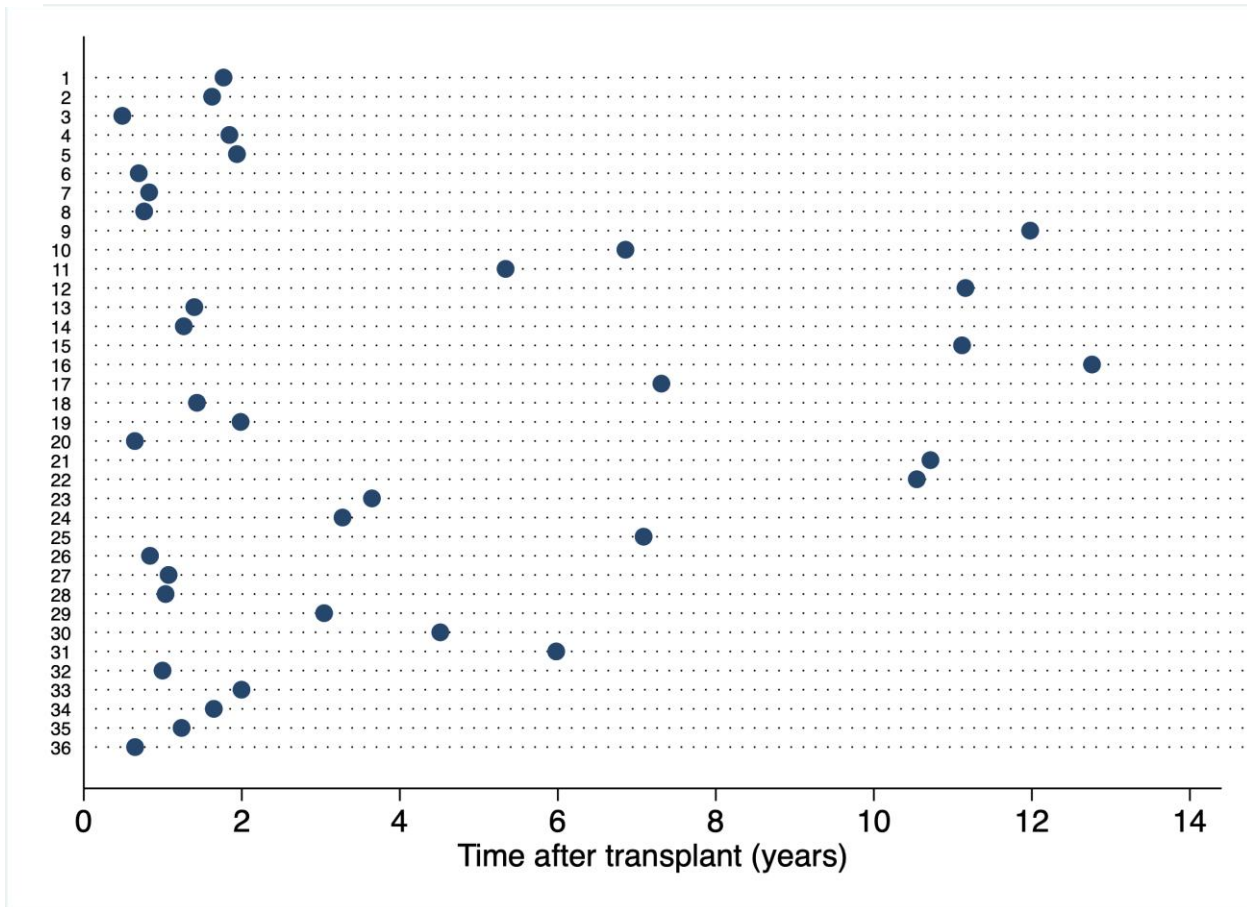
Supplemental Figure S1. Time post-heart transplant A) Median time after heart transplant in years to date of non-invasive testing (n=36).

A



B) Timeline chart of time after heart transplant in years by test number.

B



Supplemental Table S1. Baseline immunosuppression for heart transplant patients stratified by time post-transplant.

Time post-transplant (N=36)	Median drug levels or doses where appropriate (IQR)				
	Tacrolimus level in ug/L	Cyclosporine trough level in ug/L	Myfortic total dose in mg/day	Prednisone total dose in mg/day	Sirolimus level in ug/L
Less than 1 year (n=7)	10.8 (8.8-11.3)	N/A	1440 (1080- 1440)	2.5 (2.5-4.4)	N/A
Year 1 to 2 (n=12)	8.8 (8.1-9.5)	90 (80.5-99.5)	1080 (720-1260)	5 (3.75-5)	5.6 (5.2-5.7)
Year 2 to 5 (n=6)	5.6 (4.9-5.7)	N/A	1260 (900-1440)	5 (4.4-5.6)	6.7 (6-1-7.3)
Greater than 5 years (n=11)	7.9 (6.9-7.6)	N/A	720 (630-1020)	5 (5-5)	13.4 (9.7-13.4)