

Table 1. Sensitivity and specificity of IGRA and PPD tests in detecting LTBI in patients with immune-mediated diseases

Systematic Review	Studies(n)	Test	Sensitivity	Specificity
Auguste (2016)	6	IGRA GIT	0.11 – 0.50	0.57 – 1.00
	4	IGRA T-SPOT	0.25 – 0.48	0.57– 0.94
	1	IGRA Gold	0.17	0.94
	3	PPD≥ 10 mm	0.07 – 0.55	0,77 – 0,93
	7	PPD ≥ 5 mm	0.22 – 0.63	0.60 – 0.92

Tabel 2. Sensitivity and specificity of IGRA and PPD tests in detecting LTBI in receptors of solid organ transplants

Systematic Review	Studies(n)	Test	Sensitivity	Specificity
Nasiri (2019) *	7	IGRA GIT	0.58	0.89
	4	IGRA T-SPOT	0.55	0.92
	6	PPD ≥ 5 mm	0.46	0.86
Auguste (2016)	2	IGRA GIT	0 – 0.73	0.60 – 0.79
	1	IGRA T-SPOT	0.53	-
	3	PPD≥ 10 mm	0 – 0.87	0.84 – 0.90
	1	PPD ≥ 5 mm	0.36	0.84

(*) Systematic Review and Meta-Analyse

Table 3. Effectiveness of IGRA and PPD tests in predicting the progression of tuberculosis in patients with immune-mediated inflammatory diseases.

Systematic Review	Test	Number of Patients with positive tests results (n)	Number of cases of TB progression (n)	%
Auguste (2017) Campbell (2020) Zhou (2020)	IGRA GIT IGRA T-SPOT IGRA Gold	826	31	4
	PPD ≥ 5 mm PPD≥ 10 mm	1156	34	3

Table 4. Effectiveness of IGRA and PPD tests in predicting the progression of tuberculosis in receptors of solid organ transplants.

Systematic Review	Test	Number of patients with positive tests results (n)	Number of cases of TB progression (n)	%
Campbell (2020) Zhou (2020)	IGRA GIT IGRA T-SPOT	489	9	1.8
	PPD ≥ 5 mm PPD ≥ 10 mm PPD ≥ 15mm	497	20	4

Table 5. Proposed price for integrating IGRA in Healthcare System

Test	Unit	Value practiced in Brazilian public purchases (2022)
IGRA (Quantiferon)	1	R\$ 91,23

Table 6. Results of the economic evaluation conducted for patients with immune-mediated inflammatory diseases.

Test	Cost per 1,000 tests performed (R\$)	Number of cases of Active Tuberculosis (TB) per 1,000 tests performed	Incremental effectiveness	Incremental Cost (R\$)	ICER (R\$)
PPD	425.584,18	23,67	-	-	-
IGRA	474.377,17	17,82	5,85*	48.792,99	8.340,68

(*) Sargin (2018)

Table 7. Results of the economic evaluation conducted for receptors of solid organ transplants.

Test	Cost per 1,000 tests performed (R\$)	Number of cases of Active Tuberculosis (TB) per 1,000 tests performed	Incremental effectiveness	Incremental Cost (R\$)	ICER (R\$)
PPD	251.249,20	16,80	-	-	-
IGRA	343.190,95	14,92	1,88*	91.941,75	48.905,19

(*) Nasiri (2019)

Table 8. Eligible population estimated per year *.

Population	Year 1	Year 2	Year 3	Year 4	Year 5
Patients with immune-mediated inflammatory diseases	318.101	336.890	355.678	374.466	393.256
Receptors of Solid Organ Transplants	9.561	9.811	10.059	10.309	10.558
TOTAL	327.662	346.701	365.737	384.775	403.814

(*) Data from the Sanitary Surveillance Secretariat - Ministry of Health – Brazil

Table 9. Incremental budget impact of expanding the use of IGRA for patients with immune-mediated inflammatory diseases.

Year	Eligible population	Budgetary impact PPD	Difusion rate IGRA	Budgetary impact PPD and IGRA	Incremental Budgetary impact IGRA
2022	318.101	R\$ 12.132.372,14	15%	R\$ 15.922.863,66	R\$ 3.790.491,52
2023	336.890	R\$ 12.848.984,60	20%	R\$ 18.201.492,92	R\$ 5.352.508,32
2024	355.678	R\$ 13.565.558,92	30%	R\$ 22.042.077,02	R\$ 8.476.518,10
2025	374.466	R\$ 14.282.133,24	35%	R\$ 24.693.785,90	R\$ 10.411.652,66
2026	393.256	R\$ 14.998.783,84	40%	R\$ 27.494.886,50	R\$ 12.496.102,66
Total in 5 years		R\$ 67.827.832,74		R\$ 108.355.105,99	R\$ 40.527.273,25

PPD cost per patient: R\$ 38,14

IGRA cost per patient :R\$ 117,58

Table 10. Incremental budget impact of expanding the use of IGRA for receptors of solid organ transplants.

Year	Eligible population	Budgetary impact PPD	Difusion rate IGRA	Budgetary impact PPD and IGRA	Incremental Budgetary impact IGRA
2022	9.561	R\$ 364.656,54	15%	R\$ 478.585,42	R\$ 113.928,88
2023	9.811	R\$ 374.191,54	20%	R\$ 530.068,71	R\$ 155.877,17
2024	10.059	R\$ 383.650,26	30%	R\$ 623.376,35	R\$ 239.726,09
2025	10.309	R\$ 393.185,26	35%	R\$ 679.816,70	R\$ 286.631,44
2026	10.558	R\$ 402.682,12	40%	R\$ 738.173,13	R\$ 335.491,01
Total in 5 years		R\$ 1.918.365,72		R\$ 3.050.020,30	R\$ 1.131.654,58

PPD cost per patient: R\$ 38,14

IGRA cost per patient :R\$ 117,58