



QuantiFERON Monitor[®]

Improve the clinical management
of your transplant patients

Sample to Insight

Every transplant is precious

For patients awaiting an organ transplant, this gift carries with it the promise of survival and a better life. Although 117,700 solid organ transplants were performed in 2013, this addressed less than 10% of the global need (1). Moreover, for those patients who were able to receive transplants, the challenge of avoiding posttransplant morbidity and mortality still remained.

Patient immunosuppression is a necessity for successful solid organ transplantation. However, an estimated 40–70% of posttransplant mortality is attributable to the immunosuppression of the transplant recipient (2, 3). An over-immunosuppressed patient is susceptible to opportunistic infections and drug toxicity while an under-immunosuppressed patient can experience allograft rejection (4, 5). Transplantation teams have historically relied upon crude markers such as therapeutic drug monitoring and clinical events to guide the management of immunosuppression therapy. In order to transition towards individualized patient management, transplant teams are looking to complement existing methods with novel and objective markers of immune function that can aid in maintaining the optimal therapeutic window for their patients (3) (Figure 1).

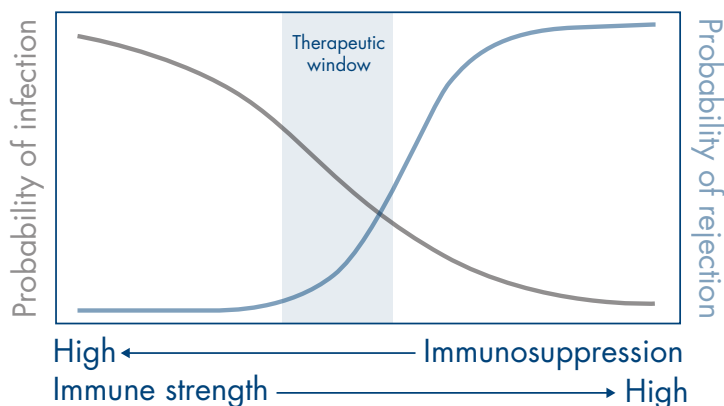


Figure 1. The challenge of posttransplant therapy.

Maintain the optimal therapeutic window for your patients

“An ideal immune function test should be accessible, rapid, provide a marker of net immunity, not be affected by age or gender, and provide a warning of impending clinical events. To date, QFM appears to satisfy many of these criteria.”(3)

QuantiFERON Monitor (QFM®) is the only assay available that provides assessment of an individual’s cell-mediated immune response through dual innate and adaptive immune system stimulation, providing both qualitative and quantitative analysis of cell-mediated immunity. QFM is designed to detect cell-mediated immune response in the immunosuppressed solid organ transplant population and is used in conjunction with risk assessment and other medical and diagnostic evaluations.

Find the right balance with QuantiFERON Monitor

QFM is an in vitro diagnostic test that measures interferon gamma (IFN- γ) in plasma following incubation of heparinized whole blood with innate and adaptive immune response stimulants. QFM results are interpreted based upon the IFN- γ response to these stimulants, providing a warning of impending events (Table 1).

Table 1. QFM results interpretation (2)

QFM results IFN- γ (IU/ml)	Classification	Interpretation
<15	Low	Subject has low IFN- γ response to innate and adaptive immune stimulants
15-1000	Moderate	Subject has moderate IFN- γ response to innate and adaptive immune stimulants
>1000	High	Subject has high IFN- γ response to innate and adaptive immune stimulants

QFM results are available the next day and the dual stimulation with innate and adaptive ligands confers a significant advantage over single-stimulant assays (3).

Providing insight into your patients' immune status

QFM was evaluated in an observational, cross-sectional study of solid organ transplant patients (3). This study found that:

- IFN- γ responses in pretransplant and early posttransplant patients were significantly lower than those in the healthy population.
- IFN- γ responses in healthy individuals were not affected by age or gender.
- Responses in the early posttransplant patients were consistently lower than those in healthy controls regardless of the timepoint.
- IFN- γ responses in late posttransplant patients (who have reduced levels of immunosuppression) were significantly higher than those in the early posttransplant group.

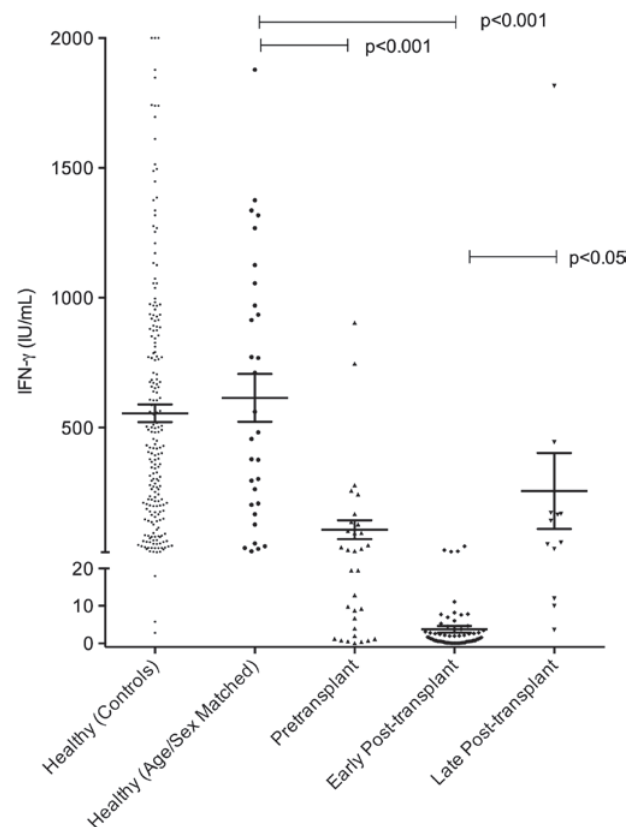


Figure 2. Measurements of IFN- γ responses in a transplant patient population using QuantiFERON Monitor (3).

Ordering Information

Product	Contents	Cat. no.
QFM 2 Plate Kit ELISA	Microplate strips; IFN- γ Standard, lyophilised; Green Diluent; Conjugate 100x Concentrate, lyophilised; Wash Buffer 20x Concentrate; Enzyme Substrate Solution; Enzyme Stopping Solution	0650-0201
QFM LyoSpheres™	10 vials of pelleted lyophilised stimulants (1 each)	0650-0701
QFM Blood Collection Tubes (100)	QuantiFERON Monitor Blood Collection Tubes (50 each)	0650-0101

Product information and technical guides are available from QIAGEN, via your distributor, or by visiting www.QuantiFERON.com.

References

1. Global Observatory on Donation and Transplantation (GODT) <http://www.transplant-observatory.org>.
2. *QuantiFERON Monitor Package Insert*. Rev. 01. November 2014.
3. Sood, S. et al. (2014) A novel biomarker of immune function and initial experience in a transplant population. *Transpl. J.* **97**, e50–e51.
4. Fernández-Ruiz, M., Kumar, D., and Humar, A. (2014) Clinical immune-monitoring strategies for predicting infection risk in solid organ transplantation. *Clin. Transl. Immunol.* **3**, e12.
5. Sood, S. and Testro, A.G. (2014) Immune monitoring post liver transplant. *World J. Transplant.* **4**, 30.

QuantiFERON Monitor is CE marked.

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