

To: UPHS Physicians and Staff

From: **Leslie M Shaw, PhD**
Michael C Milone, MD, PhD
JoAnn Gardiner, BS, MS

Date: January 4, 2022

Re: **Updated Target Drug Therapy Monitoring Ranges for Tacrolimus and Cyclosporine**

Effective December 15, 2021 updated target drug therapy monitoring trough blood concentration ranges for Tacrolimus and for Cyclosporine will be provided in the interpretative data in the reports for these immunosuppressant drug tests.

The target ranges and corresponding post-transplant time periods for **Tacrolimus** and for **Cyclosporine**, summarized in the table below for solid organ transplant and bone marrow transplant patients, were updated in collaboration with our Transplant Pharmacy and Clinical teams. No changes were recommended for Lung or Bone Marrow transplant patient monitoring but are included in the table as well.

The standard of practice for Trough blood sample timing for Tacrolimus and for Cyclosporine remains the same: blood collection within one hour prior to the morning dose.

Contact information:

Clinical Chemistry resident: 215-980-9770

Leslie M Shaw

Email: Shawlmj@pennmedicine.upenn.edu

Cell: 267-251-8901

Michael C Milone

Email: Milone@pennmedicine.upenn.edu

Cell: 215-900-4954

JoAnn Gardiner

Email: JoAnn.Gardiner@pennmedicine.upenn.edu

Cell: 215-684-9457

CC: Charlene Bierl, MD, PhD

Deborah Mincarelli, MT (ASCP)

Target trough blood concentration and corresponding post-transplant time ranges for solid organ and bone marrow transplant patients.				
TACROLIMUS			CYCLOSPORINE	
Kidney			Kidney and Pancreas	
8-12 µg/L	0-3 months		125-250 µg/L	0-12 months
6-10 µg/L	4-12 months		80-125 µg/L	> 12 months
5-8 µg/L	> 12 months			
Pancreas				
8-12 µg/L	0-6 months			
6-10 µg/L	7-12 months			
5-8 µg/L	>12 months			
Heart			Heart	
10-12 µg/L	0-12 months		250-350 µg/L	0-12 months
8-10 µg/L	13-24 months		100-150 µg/L	> 12 months
5-8 µg/L	> 24 months			
Liver			Liver	
10-12 µg/L	0-3 months		150-350 µg/L	0-12 months
5-8 µg/L	3-6 months		100-150 µg/L	> 12 months
4-8 µg/L	6-12 months			
Lung			Lung	
8-12 µg/L	0-12 months		250-350 µg/L	0-12 months
6-8 µg/L	> 12 months		200-300 µg/L	>12 months
Bone Marrow			Bone Marrow	
5-15 µg/L			200-250 µg/L	