

CHANGES TO UVMMC FLOW CYTOMETRY TESTING

Phase I: Lymphocyte Subset Analysis



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Effective 04/27/2021, the Flow Cytometry Laboratory will be transitioning testing platforms for Flow Cytometry testing. The first phase of this transition involves lymphocyte subset analysis, specifically T-Cell Subsets and T-, B-, NK-Cell Subsets. There will be changes to order codes, test names, reporting, specimen stability, and acceptable container types. A brief summary is provided below with full details in the following tables. Later this year, Phase II will transition the CD19 CD20 Panel, Stem Cell CD34 Blood, and Stem Cell CD34 Apheresis Product to the new platform. Finally, Phase III will transition 5-color Leukemia/Lymphoma Panels to 10-color screening and triage panels. More details on these phases to follow.

- Absolute CD3 (LAB2326, Legacy code TOTCD3) will be **discontinued as a stand-alone, orderable test**. Requests for this test have been exceedingly rare, and a total CD3 count may be ascertained by ordering T-Cell Subsets. Please note that the analytical measurement range (AMR) for this component will change to 17 – 5000 cells/uL. See explanation below.
- Sodium heparin (green top) will no longer be an acceptable container type.
- Absolute counts and percentage values will be reported for all cell subsets, as well as the CD4:CD8 ratio.
- Adult Reference ranges will appear slightly different. These are provided by the manufacturer and have been verified within our laboratory. There will be no changes to the pediatric reference ranges.
- Test names will be updated to reflect the most current nomenclature, replacing the term “Immunodeficiency” with “T-Cell Subsets” or “T-, B-, NK-Cell Subsets”.
- Complete Blood Count with Differential (CBCDF) will no longer be required simultaneously as the new tests are single-platform and an absolute lymphocyte count is directly measured by the instrument.
- Due to the nature of single platform testing (absolute counts directly measured) vs dual-platform testing (absolute counts calculated), the AMR for each, absolute component will be more restrictive and absolute counts will no longer be reported down to <1. Results that fall above or below the AMR will be reported as such. The new AMR are listed in the table below:

Component	AMR
Absolute CD3	17 – 5000 cells/uL
Absolute CD4	11 – 3000 cells/uL
Absolute CD8	11 – 2243 cells/uL
Absolute CD19	5 – 2000 cells/uL
Absolute CD16+CD56	10 – 1069 cells/uL

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Order Codes	Old	New
Test Name	Immunodeficiency Panel	T-Cell Subsets
Epic Code	LAB2318	LAB15287
Atlas Code	IP	LAB15287
Mayo Access ID	FAH293	FAH5941
LOINC Code	N/A	65759-3
Acceptable Container		
	EDTA (Lav Top, Pedi Purple) Sodium Heparin (Green Top)	EDTA (Lav Top, Pedi Purple)
Collection Requirements		
	Ambient; Test within 48 hours	Ambient; Test within 48 hours
Adult Reference Ranges (units):		
CD3 (%)	62 - 87	56 - 84
CD4 (%)	35 - 63	31 - 64
CD8 (%)	10 - 35	9 - 39
Absolute CD3 (cells/uL)	548 - 2,118	840 - 2,669
Absolute CD4 (cells/uL)	329 - 1,427	488 - 1,734
Absolute CD8 (cells/uL)	N/A	154 - 1,097
4/8 Ratio	N/A	≥ 0.9

Resultable Codes						
	Immunodeficiency Panel (LAB2318)	T-Cell Subsets (LAB15287)	Epic Code	Atlas Code	Mayo Access ID	LOINC Code
Name	CD3	CD3	12301000954	CD3	FAH294	8124-0
Name	CD4	CD4	12301000955	CD4	FAH295	8123-2
Name	CD8	CD8	12301000956	CD8	FAH296	8101-8
Name	N/A	Absolute CD3	12301000951	TOTCD3	FAH5580	8122-4
Name	Absolute CD4	Absolute CD4	12301000957	TOTCD4	FAH297	24467-3
Name	N/A	Absolute CD8	12301000960	TOTCD8	FAH5581	14135-8
Name	N/A	4/8 Ratio	12301011933	48RATIO	FAH5938	54218-3

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Order Codes	Old	New
Test Name	Immunodef Panel B + NK	T, B, NK-Cell Subsets
Epic Code	LAB343	LAB15288
Atlas Code	IMM	LAB15288
Mayo Access ID	FAH5221	FAH5942
LOINC Code	N/A	45268-0
Acceptable Container	EDTA (Lav Top, Pedi Purple) Sodium Heparin (Green Top)	EDTA (Lav Top, Pedi Purple)
Collection Requirements	Ambient; Test within 30 hours	Ambient; Test within 24 hours
Adult Reference Ranges (units):		
CD3 (%)	62 - 87	56 - 84
CD4 (%)	35 - 63	31 - 64
CD8 (%)	10 - 35	9 - 39
CD19 (%)	5 - 22	5 - 25
CD16+CD56 (%)	5 - 23	5 - 31
Absolute CD3 (cells/uL)	548 - 2,118	840 - 2,669
Absolute CD4 (cells/uL)	329 - 1,427	488 - 1,734
Absolute CD8 (cells/uL)	66 - 750	154 - 1,097
Absolute CD19 (cells/uL)	0 - 488	73 - 562
Absolute CD16+CD56 (cells/uL)	72 - 425	108 - 680
4/8 Ratio	N/A	≥ 0.9

Resultable Codes						
	Immunodef Panel B + NK (LAB343)	T, B, NK-Cell Subsets (LAB15288)	Epic Code	Atlas Code	Mayo Access ID	LOINC Code
Name	CD3	CD3	12301000954	CD3	FAH294	8124-0
Name	CD4	CD4	12301000955	CD4	FAH295	8123-2
Name	CD8	CD8	12301000956	CD8	FAH296	8101-8
Name	CD19	CD19	12301009570	CD19	FAH5222	8117-4
Name	CD16+CD56	CD16+CD56	12301000959	CDNK	FAH5223	42189-1
Name	Absolute CD3	Absolute CD3	12301000951	TOTCD3	FAH5580	8122-4
Name	Absolute CD4	Absolute CD4	12301000957	TOTCD4	FAH297	24467-3
Name	Absolute CD8	Absolute CD8	12301000960	TOTCD8	FAH5581	14135-8
Name	Absolute CD19	Absolute CD19	12301000961	TOT19	FAH5582	8116-6
Name	Absolute CD16+CD56	Absolute CD16+CD56	12301000962	TOTNK	FAH5583	42188-3
Name	N/A	4/8 Ratio	12301011933	48RATIO	FAH5938	54218-3

Please reach out to the Medical Director of Flow Cytometry at Katherine.Devitt@uvmhealth.org with questions or concerns about these changes.

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