

Holographic Assessment of Lymphoma Tissue (HALT) for Global Oncology Field Applications

Divya Pathania^{#1,2}, Hyungsoon Im^{#1,2}, Aoife Kilcoyne^{1,2}, Aliyah R. Sohani³, Liubov Fexon¹, Misha Pivovarov^{1,2}, Jeremy S. Abramson^{4,5,6}, Thomas C. Randall^{5,7,8}, Bruce A. Chabner^{5,6}, Ralph Weissleder^{1,2,9*}, Hakho Lee^{1,2*}, Cesar M. Castro^{1,5,6*}

#These authors contributed equally to the paper

¹ Center for Systems Biology, Massachusetts General Hospital, Harvard Medical School, Boston, MA 02114

² Department of Radiology, Massachusetts General Hospital, Harvard Medical School, Boston, MA 02114

³ Department of Pathology, Massachusetts General Hospital, Boston, MA, 02114

⁴ Center for Lymphoma, Massachusetts General Hospital, Boston, MA, 02114

⁵ Massachusetts General Hospital Cancer Center, Boston, MA 02114

⁶ Department of Medicine, Massachusetts General Hospital, Harvard Medical School, Boston, MA 02114

⁷ Global Oncology Initiative, Dana-Farber / Harvard Cancer Center, Boston, MA, 02115

⁸ Department of Obstetrics, Gynecology and Reproductive Biology, Massachusetts General Hospital, Boston, MA 02114

⁹ Department of Systems Biology, Harvard Medical School, Boston, MA 02115

* Corresponding authors:

C. M. Castro, MD; H. Lee, PhD; R. Weissleder, MD, PhD

Center for Systems Biology

Massachusetts General Hospital

185 Cambridge St, CPZN 5206, Boston, MA 02114

617-726-8226 (Telephone) / 617-643-6133 (Fax)

castro.cesar@mgh.harvard.edu

hlee@mgh.harvard.edu

rweissleder@mgh.harvard.edu

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Table S1. Hardware and assay cost for cellular detection and profiling

	Name	Current Cost	Current cost per single assay*	
Antibodies	Purified Mouse IgG1, κ Isotype Control	\$110 (500 μ g)	\$0.055	
	Purified Mouse IgG2a, κ Isotype Control	\$110 (500 μ g)	\$0.055	
	Purified Mouse IgG2b, κ Isotype Control	\$110 (500 μ g)	\$0.055	
	Purified anti-human Ig light chain κ Antibody	\$85 (100 μ g)	\$0.21	
	Purified anti-human Ig light Chain, λ Antibody	\$126 (500 μ g)	\$0.063	
	Purified anti-human CD3 Antibody	\$50 (100 μ g)	\$0.125	
	Purified anti-human CD5 Antibody	\$85 (100 μ g)	\$0.21	
	Purified anti-human CD10 Antibody	\$95 (100 μ g)	\$0.24	
	Purified anti-human CD15 (SSEA-1) Antibody	\$85 (100 μ g)	\$0.21	
	Purified anti-human CD19 Antibody	\$50 (100 μ g)	\$0.125	
	Purified anti-human CD20 Antibody	\$65 (100 μ g)	\$0.162	
	Beads	Dynabeads	\$640 (5mL)	\$3.52
	Others	misc. reagents (eg. buffer solutions, tubes)		\$0.34
Hardware	iPhone 4S	\$145		
	Snap-on module	\$6 (LED, switch, battery) \$5 (Plastic mount) \$20 (pin hole) \$25 (lens)		
	Snap-on module cost: \$56; single assay cost: \$5			
	*The current cost figures are based on commercial products for end-users and would decrease with bulk orders upon scale up.			

Table S2. List of antibodies used in this study

Antibody	Clone	Catalog no.	Vendor
Purified Mouse IgG1, κ Isotype Control	MOPC-21	400102	Biologend
Purified Mouse IgG2a, κ Isotype Control	MOPC-173	400202	Biologend
Purified Mouse IgG2b, κ Isotype Control	MG2b-57	401202	Biologend
Purified anti-human Ig light chain κ Antibody	MHK-49	316502	Biologend
Purified anti-human Ig light Chain, λ Antibody	JDC-12	555793	BD Biosciences
Purified anti-human CD3 Antibody	OKT3	317302	Biologend
Purified anti-human CD5 Antibody	UCHT2	300602	Biologend
Purified anti-human CD10 Antibody	HI10a	312202	Biologend
Purified anti-human CD15 (SSEA-1) Antibody	W6D3	323002	Biologend
Purified anti-human CD19 Antibody	HIB19	302202	Biologend
Purified anti-human CD20 Antibody	2H7	302302	Biologend
Anti-mouse IgG (H+L), F(ab') ₂ Fragment (Alexa Fluor® 647 Conjugate)		4410	Cell Signaling Technology

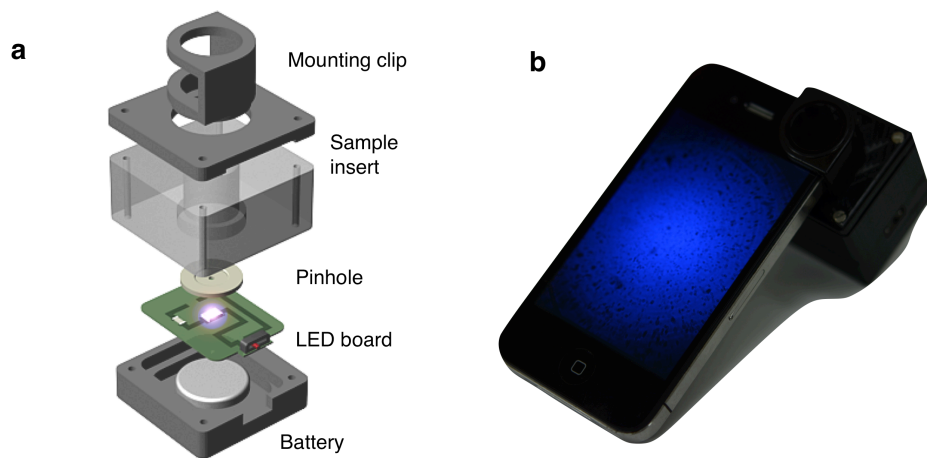


Figure S1. (a) The snap-on module for a smartphone consists of an LED powered by a coin battery, a pinhole for uniform illumination with partial coherence, and a sample mount. **(b)** Photograph of the snap-on module attached on the iPhone 4S.

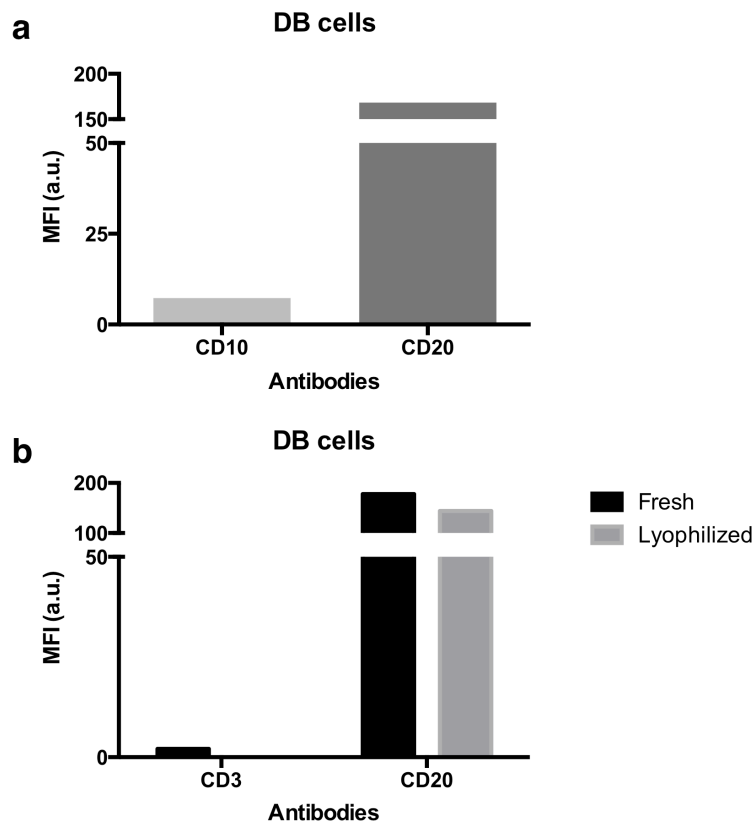


Figure S2. (a) DB cells were profiled for CD markers (CD10 and CD20) using flow cytometry. CD20 exhibited increased expression in DB cells as compared to CD10. **(b)** Using the smartphone based system imparts portability to our detection system. In order to increase the portability and shelf-life of our system we tested the system with lyophilized antibodies. Lyophilized antibodies (CD3 and CD20) were tested and compared with parent solution antibodies after 2 weeks of storage at 4°C by flow cytometry and exhibited similar activity as the original antibodies.