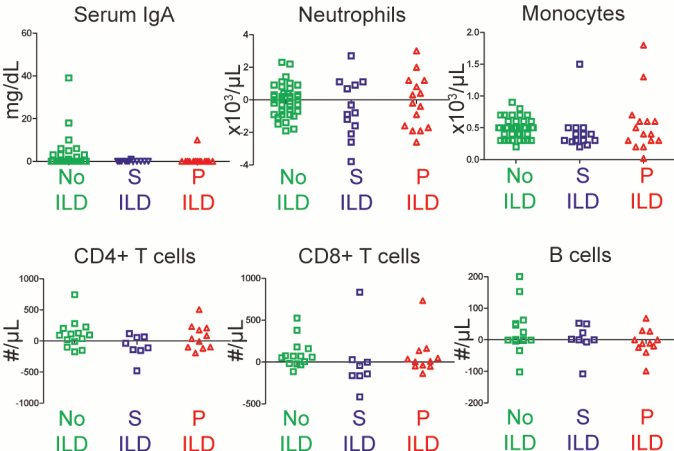
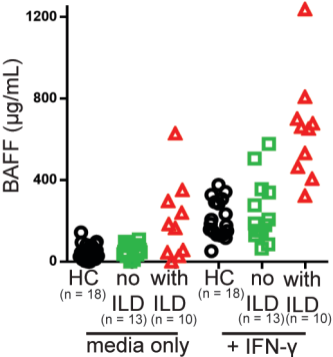


# Change over 24 months



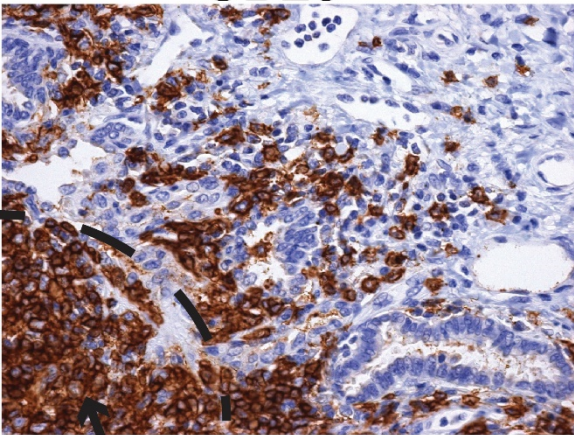


# PBMC



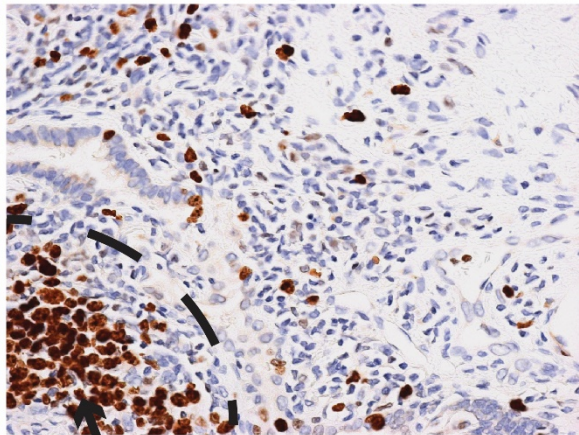


CD20

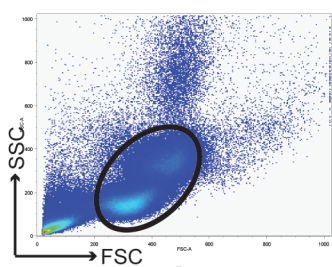


Follicle

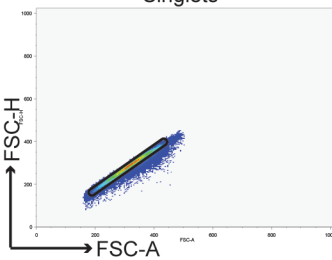
Ki67



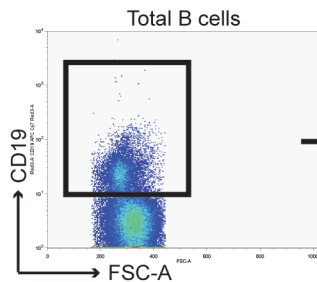
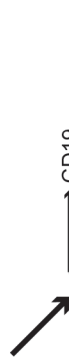
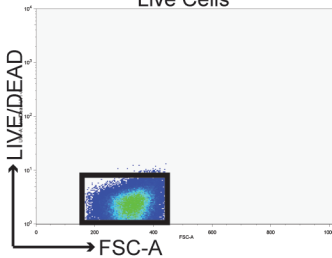
Follicle



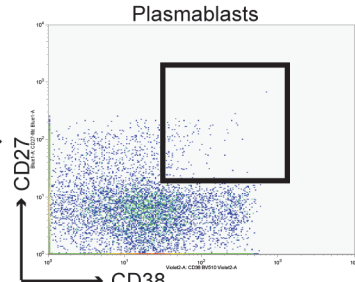
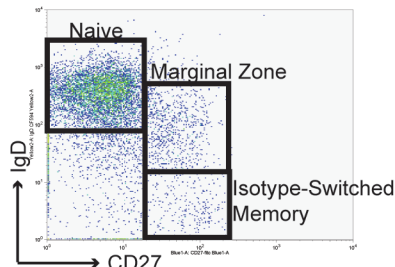
Singlets



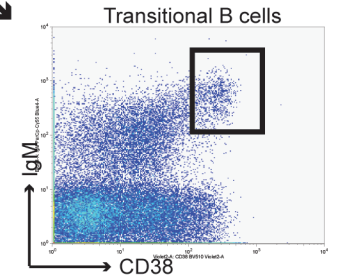
Live Cells



Total B cells

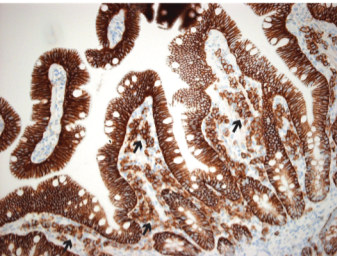


Plasmablasts

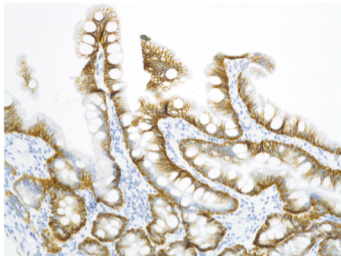


Transitional B cells

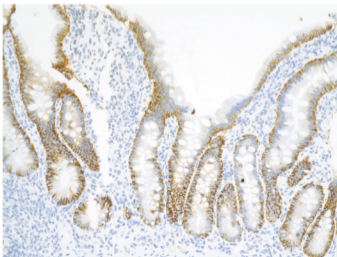
# CD138+ Plasma Cells



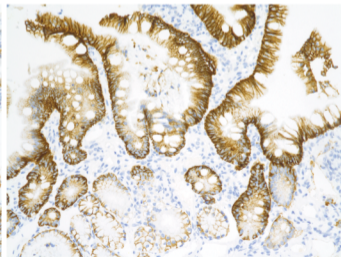
Healthy Control



CVID ILD patient 1



CVID ILD patient 2



CVID ILD patient 3

38 **Supplementary Table 1.** Antibodies used for tissue immunofluorescence and  
 39 immunohistochemistry.

<b>Antigen</b>	<b>Clone</b>	<b>Source</b>	<b>Company</b>
BAFF	1D6	mouse	eBioscience
BAFF-R	EPR10914	rabbit	Abcam
Bcl-1	EP-12	rabbit	Dako
Bcl-2	124	mouse	Dako
CD14	EPR3653	rabbit	Abcam
CD20	L26	mouse	Leica
CD23	1B12	mouse	Leica
CD27	137B4	mouse	Leica
CD3	LN10	mouse	Leica
CD3	CD3-12	rat	AbD Serotec
CD38	EPR4106	rabbit	Abcam
Cleaved caspase-3	polyclonal	rabbit	Abcam
ELA	polyclonal	rabbit	Abcam
IgD	polyclonal	goat	Southern Biotech
IgG	JDC-10	mouse	Southern Biotech
IgM	polyclonal	rabbit	Dako
Ki67	MIB-1	mouse	Dako
TACI	polyclonal	rabbit	Abcam

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42 **Supplementary Table 2.** Antibodies used for mass cytometry.

Metal	Marker	Clone	Manufacturer
89Y	CD45	HI30	Fluidigm
113In	CD57	HCD57	Biolegend
115In	CD11c	Bu15	Biolegend
141Pr	IgD	IA6-02	Biolegend
142Nd	CD19	HIB19	Biolegend
143Nd	CD45RA	HI100	Biolegend
144Nd	CD103	Ber-Act8	Biolegend
145Nd	CD4	RPA-T4	Biolegend
146Nd	CD8	RPA-T8	Biolegend
147Sm	pSTAT5	47	Fluidigm
148Nd	CD16	3G8	Biolegend
149Sm	CD127	REA614	Miltenyi
150Nd	CD1c	L161	Biolegend
151Eu	CD123	6H6	Biolegend
152Sm	CD66b	G10F5	Biolegend
153Eu	pSTAT1	58D6	Fluidigm
154Sm	CD86	IT2.2	Biolegend
155Gd	CD27	O323	Biolegend
158Gd	CD33	WM53	Biolegend
160Gd	CD14	M5E2	Biolegend
161Dy	CD56	B159	BD Biosciences
162Dy	CD20	2H7	Biolegend
163Dy	anti-APC / APC BAFFR	APC003 / 8A7	Biolegend / Biolegend
165Ho	Anti- PE/PE_BAFF	PE001/T7- 241	Biolegend/Biolegend
166Er	CD169	7-239	Biolegend
168Er	CD3	UCHT1	Biolegend
169Tm	STAT1	10C4B40	Biolegend
170Er	CD38	HB-7	Biolegend
171Yb	CD161	HP-3G10	Biolegend
174Yb	HLADR	L243	Biolegend
209Bi	CD11b	ICRF44	Fluidigm

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