SUPPLEMENTARY INFORMATION

Supplementary Table 1. Classification of etiology of septic shock by pathogen identified, details of pathogen / site / method of detection and maximum C-reactive protein (max CRP) measured during the illness.

Supplementary Table 2. Results of multivariable linear regression for immune cell proportions (neutrophils, CD8 T cells, naïve CD4 T cells and naïve B cells) by age, aetiology and BASIC Endotype in 19 participants with sepsis.

Supplementary Figure 1. Details of Weighted Gene Co-expression Network analysis.

Supplementary Table 1.

Patient	Classification	Pathogen 1			Pathogen 2			Pathogen 3			Max CRP
		Pathogen	Site	Method	Pathogen	Site	Method	Pathogen	Site	Method	
BAS2064	Definite bacterial	*Neisseria meningitidis*	Blood	PCR							454
BAS2022	Definite viral	Respiratory syncytial virus	NPA	PCR							36
BAS2021	Definite viral	Cytomegalovirus	ETT / urine / blood	PCR							30
BAS1929	Definite viral	Parechovirus	CSF / NPA	PCR							19
BAS1911	Definite viral	Parechovirus	NPA	PCR							5
BAS1884	Probable bacterial	*Pseudomonas aeruginosa*	Wound swab	Culture							232
BAS1849	Probable bacterial	None identified									219
BAS1847	Probable bacterial	Adenovirus	NPA	PCR							–
BAS1840	Definite viral	Adenovirus	NPA	PCR							24
BAS1833	Definite bacterial	*Pseudomonas aeruginosa*	NPA	Culture							78
BAS1818	Definite bacterial	Group A streptococci	Pleural fluid	Culture	Adenovirus	NPA	PCR				394
BAS1817	Definite viral	Parainfluenzae virus	NPA	PCR							0
BAS1806	Probable bacterial	*Pseudomonas aeruginosa*	ETT	Culture							240
BAS1789	Definite viral	Adenovirus	NPA	PCR	Parainfluenzae virus 3	NPA	PCR	Parvovirus	Blood	PCR	40
BAS1746	Definite viral	Adenovirus	NPA	PCR	Rhinovirus	NPA	PCR				
BAS1724	Definite bacterial	Group A streptococci	Facial / wound / sputum	Culture	Varicella zoster	Facial	PCR				265
BAS1716	Definite bacterial	*Neisseria meningitidis*	CSF	PCR							216
BAS1701	Probable bacterial	*Enterococcus faecalis*	Wound swab	Culture	*Clostridium paraputrificum*	Ascitic fluid	Culture				49
BAS1693	Definite bacterial	*Streptococcus pneumoniae*	CSF	Culture							311

Supplementary Table 2.

Neutrophils

	n	TP1		TP1 –> TP2 (delta)	
Proportions (median, IQR)	19	0.40 (0.27–0.48)		-0.13 (-0.23–-0.02)	
Regression analysis		Coefficient (SE)	p-value	Coefficient	p-value
Age					
0–11 months	5	–	–	–	–
12–23 months	2	0.036 (0.136)	0.794	-0.106 (0.951)	0.289
24 months–4 years	6	0.176 (0.105)	0.121	-0.063 (0.074)	0.411
5 years–12 years	4	0.020 (0.865)	0.865	-0.073 (0.082)	0.389
>12 years	2	0.349 (0.151)	0.039	0.056 (0.105)	0.608
Aetiology					
Viral	8	–	–	–	–
Bacterial	11	-0.067 (0.089)	0.464	0.149 (0.062)	0.034
BASIC Endotype at TP1					
Endotype 1	9	–	–	–	–
Endotype 2	10	0.111 (0.077)	0.175	-0.07 (0.215)	0.215
Total		r2=0.214	0.178	r2=0.235	0.158

CD8 T cells

	n	TP1		TP1 –> TP2 (delta)	
Proportions (median, IQR)	19	0 (0–0.005)		0.112 (0–0.022)	
Regression analysis		Coefficient (SE)	p-value	Coefficient	p-value
Age					
0–11 months	5	–	–	–	–
12–23 months	2	-0.025 (0.049)	0.612	0.002 (0.022)	0.933
24 months–4 years	6	-0.034 (0.038)	0.391	0.015 (0.017)	0.384
5 years–12 years	4	-0.031 (0.423)	0.474	0.030 (0.019)	0.141
>12 years	2	-0.035 (0.054)	0.531	0.009 (0.024)	0.717
Aetiology					
Viral	8	–	–	–	–
Bacterial	11	-0.011 (0.032)	0.743	-0.014 (0.014)	0.361
BASIC Endotype at TP1					
Endotype 1	9	–	–	–	–
Endotype 2	10	-0.193 (0.028)	0.500	0.016 (0.012)	0.219
Total		r2=-0.223	0.830	r2=-0.073	0.591

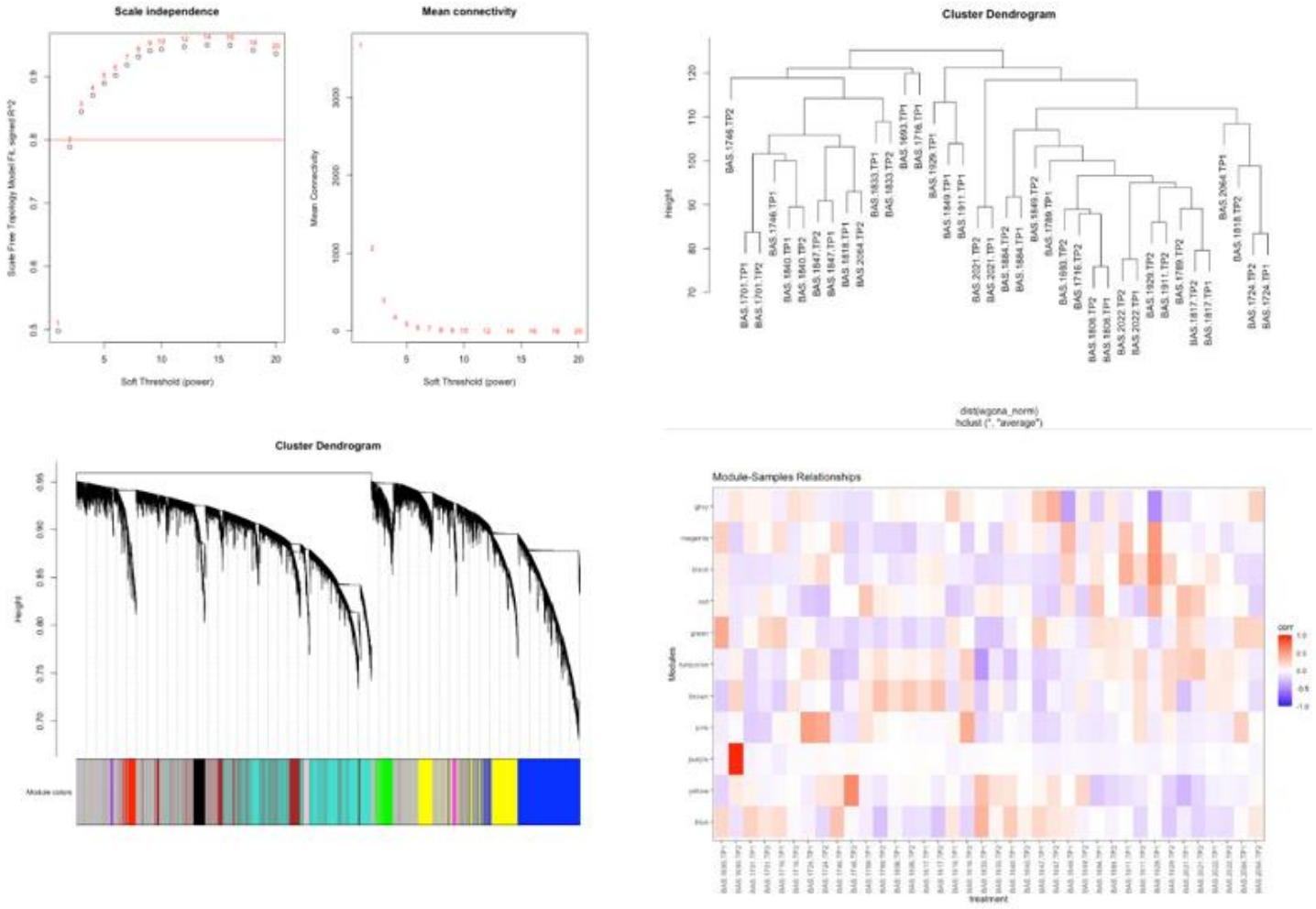
Naïve CD4 T cells

	n	TP1		TP1 –> TP2 (delta)	
Proportions (median, IQR)	19	0.087 (0.070–0.127)		0.045 (0.166–0.129)	
Regression analysis		Coefficient (SE)	p-value	Coefficient	p-value
Age					
0–11 months	5	–	–	–	–
12–23 months	2	0.011 (0.042)	0.792	-0.089 (0.064)	0.162
24 months–4 years	6	0.041 (0.032)	0.231	-0.043 (0.053)	0.424
5 years–12 years	4	-0.002 (0.036)	0.946	0.012 (0.059)	0.835
>12 years	2	-0.003 (0.046)	0.724	-0.115 (0.075)	0.152
Aetiology					
Viral	8	–	–	–	–
Bacterial	11	0.010 (0.027)	0.724	0.020 (0.0447)	0.657
BASIC Endotype at TP1					
Endotype 1	9	–	–	–	–
Endotype 2	10	-0.026 (0.024)	0.288	-0.07 (0.215)	0.957
Total		r2=-0.155	0.728	r2=-0.055	0.957

Naïve B cells

	n	TP1		TP1 –> TP2 (delta)	
Proportions (median, IQR)	19	0.039 (0.026–0.053)		0.022 (0.013–0.069)	
Regression analysis		Coefficient (SE)	p-value	Coefficient	p-value
Age					
0–11 months	5	–	–	–	–
12–23 months	2	0.051 (0.046)	0.295	0 (0.032)	0.992
24 months–4 years	6	-0.005 (0.036)	0.895	0.017 (0.024)	0.496
5 years–12 years	4	-0.025 (0.040)	0.543	-0.020 (0.027)	0.479
>12 years	2	-0.033 (0.052)	0.538	-0.040 (0.035)	0.271
Aetiology					
Viral	8	–	–	–	–
Bacterial	11	-0.010 (0.030)	0.747	-0.035 (0.021)	0.120
BASIC Endotype at TP1					
Endotype 1	9	–	–	–	–
Endotype 2	10	-0.028 (0.026)	0.306	0.040 (0.018)	0.047
Total					

Supplementary Figure 1.



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