ID	GA at birth	Weight at Birth (g)	PMA at testing	Clinical Scenario prompting testing	Indication	Year	Concurrent Diagnoses	Significant Infectious History
P-1	23 5/7	433	52	Readmitted at 6 months for worsening BPD symptoms	History	2006	BPD	
P-2	25	737	37	Culture negative sepsis	History	2006	Duodenal atresia, grade II IVH, ROP, TPN cholestasis, anasarca	Culture negative sepsis, nasal bridge cellulitis
P-3	24 1/7	640	56	Readmitted at 7 months for infection - abdominal distension, emesis, lethargy; found to have *S. aureus* bacteremia, pericardial effusion	History	2006	BPD, GI dysmotility, grade II IVH, ROP	Proteus pneumonia, Staph sepsis, possible c. diff infection
P-4	28	1315	32	DiGeorge syndrome	History	2009	Tetrology of Fallot, pulmonary stenosis, DiGeorge syndrome, grade II IVH	
P-5	24 3/7	400	40	Low TRECS	TRECs	2009	IUGR, BPD, CMV-postnatal, cerebellar hemorrhages	E. coli sepsis, aquired CMV, serratia marceses, CONS bacteremia
P-6	27	870	51	Transferred to our hospital at 5 months for second opinion; immunology consulted for history of prolonged diarrhea and infections	History	2010	BPD, GI dysmotility, grade II IVH, ROP	Oral thrush, persistent diarrhea
P-7	25	520	47	*S. aureus* bacteremia, diffuse osteomyelitis with abscesses	History	2010	BPD, pulmonary hypertension, grade IV IVH	MRSA bacteremia, abscesses, osteomyelitis; persistent thrush
P-8	26 3/7	623	54	Unclear, not mentioned in any note	History	2010	NEC, short gut, TPN cholestasis-transferred for omegavan	E.coli bacteremia and UTI
P-9	27 6/7	1020	40	Readmitted to NICU from home with respiratory symptoms, high illness severity	History	2011	Medical NEC	Hemophilus and moraxella pneumonia
P-10	23 1/7	510	31	Low TRECs on 2 newborn screens	TRECs	2011	Severe BPD, NEC, TPN-associated liver disease, osteopenia of prematurity	Candida parpsilosis bacteremia after NEC, Klebsiella sepsis
P-11	28 1/7	1000	34	Persistent hypogam (IgG < 25) and sepsis like episodes	History	2011	D-TGA, pulmonary stenosis, CLD, portal hypertension,renal failure requiring peritoneal dialysis	Peritonitis (related to PD cath)with staph and + B-glucan
P-12	26 3/7	480	32	Low TRECs on 4 newborn screens	TRECs	2011	Severe BPD, IUGR	
P-13	28	535	40	Recurrent infections. Assessed when transferred to our hospital at 3months of age for PDA ligation.	History	2012	Severe BPD, pulmonary hypertension, IUGR	Two episodes of Staph aureus sepsis
P-14	26 6/7	585	47	Low TRECs, leukopenia, thrombocytopenia, MRSA infections	History	2012	Mild BPD, history of medical NEC, corneal ulcer, leukopenia, thrombocytoenia, IUGR	MRSA sepsis, MRSA right eye anterior chamber infection

ID	GA at birth	Weight at Birth (g)	PMA at testing	Clinical Scenario prompting testing	Indication	Year	Concurrent Diagnoses	Significant Infectious History
P-15	24 5/7	710	53	Low TRECS at birth which normalized, T cell lymphopenia after birth. Admitted from rehab hospital for respiratory insufficiency at 6 months.	TRECs	2012	Severe BPD, pulmonary hypertension, grade III IVH	
P-16	25 1/7	890	29	Low TRECS x 3	TRECs	2013	BPD, severe IVH, bowel perforation, necrotizing enterocolitis, liver failure	*H. flu* sepsis, GBS sepsis, MRSA baceremia, MRSA lung abscess
P-17	26	791	38	Low TRECs on fourth NBS	TRECs	2013	Severe BPD, renal failure	
P-18	26 5/7	790	43	Low TRECs	TRECs	2013	Severe CLD, NEC, short gut, poor wound healing, liver failure	Cerebral abscess, liver abscess
P-19	27	875	29	Low TRECs	TRECs	2014	Mild BPD	
P-20	24 4/7	640	29	Low TRECs	TRECs	2015	Intestinal perforation, grade IV IVH, post hemorrhagic hydrocephalus	
P-21	23 2/7	550	26	Low TRECs	TRECs	2015	BPD	Citrobacter sedlaki sepsis
P-22	27	1020	37	Transferred from another NICU at 2 months for sepsis and osteomyelitis	History	2017	Prematurity, BPD, medical NEC, osteo/septic arthritis	MSSA Osteomyelitis
P-23	27	960	47	Low IgG	History	2017	Congenital nephrotic syndrome Finnish type, BPD, pulmonary hypertension	Multiple tracheitis
P-24	26 6/7	765	43	Low TRECs	TRECs	2017	Severe BPD, severe pulmonary hypertension	
P-25	24 5/7	510	35	Low TRECs	TRECs	2017	NEC, short gut, TPN cholestasis, IVC thrombus	
P-26	24 5/7	650	41	Recurrent sepsis	History	2017	Intestinal perforation, persistent anasarca, BPD	Klebsiella sepsis, Candida parapsilosis sepsis and recurrent UTI, Staph epi sepsis
P-27	23	555	39	Low TRECs	TRECs	2018	BPD, NEC, short gut, TPN cholestasis	E faecalis sepsis, MSSA cellulitis
P-28	26 5/7	440	43	Low TRECs	TRECs	2018	Severe BPD, severe pulmonary hypertension	MRSA pneumonia requiring ECMO (7/12 started), recurrent and unable to clear
P-29	26 1/7	550	34	Recurrent sepsis	History	2018	BPD, renal failure	Enterobcater pantoea UTI, MSSA sepsis
AVERAGE	**26**	**702**	**40**					

ID	NBS TREC level(s)	Immune results/recommendations	Clinical outcomes
P-1	N/A	Testing reassuring (immunoglobulins and antigen responses) (ordered by pulmonary)	Discharged to home, no concern for PID
P-2	N/A	Testing abnormal (T cell and NK cell lymphopenia, B cells normal. Normal immunoglobulins and mitogen testing) but thought secondary to anasarca.	Discharged to home and doing well at 1 year of age, then moved out of the area.
P-3	N/A	Testing reassuring (immunoglobulins, lymphocyte subsets, anitgen stimulation); PID unlikely	Remained hospitalized for non-infectious issues, eventually discharged to rehab
P-4	N/A	Testing reassuring (immunglobulins, lympocyte and T cell subsets, mitogens), no additional work up needed	Discharged to home, seen in immuno clinic at 3y/o for ear infections, testing again reassuring
P-5	<252 per notes	T and B cell lymphopenia, abnormal repsonse to mitogen stim PHA: avoid live vaccines, follow in clinic	Seen in clinic, sustained T cell lymphopenia and abnormal mitogen testing but all resolved b 3 years of age. No further infectious problems.
P-6	Normal	Testing reassuring (immunoglobulins, lymphocyte subsets, mitogens), PID unlikely	Died due to other medical problems
P-7	Normal	Testing reassuring (immunoglubulins, lymphocyte and T cell subsets, DHR), PID unlikely	Dsicharged to rehab, no further infectious issues
P-8		Testing reassuring (immunoglubulins, lymphocyte subsets), unclear which team recommended, immunology not consulted	Died at 8 months in setting of respiratory and multisystem failure
P-9	Normal	Testing reassuring (immunoglubulins, lymphocyte subsets, CH50); PID unlikely.	Discharged to home, went on to develop hydrocephalus and cerebral palsy, no immune issues
P-10	<252 at birth, 2 months, 3 months	Testing abnormal (low T cells, normal % naïve, normal PHA stim) but likely due to prematurity/stress. Recommend follow up labs and avoid live vaccines.	Discharged from NICU and had immuno follow up locally. At 6 years of age in follow up was severely developmentally delayed, tracheostomy and G tube dependent, no immune issues noted.
P-11	Normal at birth	Low IgG levels secondary to ongoing losses from post-op chylothoraces. No additional immune testing recommended.	Died due to progressive multiorgan failure
P-12	First 4 NBS with low TRECs <252, then normalized	Testing reassuring (immunoglobulins, lymphocyte and T cell memory subsets, mitogen testing), PID unlikely. Repeat testing at 6 months was normal.	Discharged to home. In follow up at 8 years has autism, developmental delay, no infectious concerns.
P-13	Normal	Testing with T cell lymphopenia, normal immunoglobulins and neutrophil oxidative index. PID unlikely but avoid live vaccines and will follow.	Infant died at 4 months of age due to acute arrest. Etiology unclear, autopsy suggested heart failure.
P-14	First 4 NBS with low TRECs <252, then normalized	Testing abnormal (normal T cells but severely deficient B and NK cells, normal T cell mitogen response)	Diagnosed with congenital bone marrow failure syndrome, genetic etiology not determined (Ikaros, Schwachman-Diasmon, Fanconi, Dyskeratosis congentia, mpl gene, and microarray all normal). Had BM transplant and is doing well at recent follow up visit.

ID	NBS TREC level(s)	Immune results/recommendations	Clinical outcomes
P-15	First screen <252, then repeats at term corrected age 331 and 659	Did a phone consult, recommended repeating flow cytometry. Mild CD4+ T cell lymphopenia, PID unlikely, no official recommendations noted.	Died from severe pulmonary hypertension
P-16	First 3 NBS with low TRECs <252	Testing with low T cells but otherwise reassuring (normal B. NK, and naïve T cell subsets and T cell mitogens). PID unlikely, lymphopenia likely secondary to prematurity and illness.	Died after redirection of care in setting of severe progressive hydrocephalus and inability to intervene given liver failure and coagulopathy
P-17	First 3 tests normal, fourth test < 252	Testing abnormal (T cell and NK cell lymphopenia, low naïve T cells) but no additional testing done because patient died; lymphopenia likely due to acute illness since earlier TRECs normal.	Died after redicrection of care in setting of severe hypoxic encephalopathy thought secondary to acidosis from renal failure or potential metabolic disorder
P-18	Repeated TREC screens <252 through 5 months of life	Testing abnormal (T cell lymphopenia, low CD4+ naïve cells, low recent thymic emigrants, normal ConA and PHA stimulation but low anti-CD3 stimulation. Immunoglobulins and neutophil oxidative burst normal). Initially were recommending further SCID varient testing but then decided anti-CD3 result was likley a lab artifact, recommended repeat flow in 4 months.	Care redirected with recurrent bleeding from ostomy, on pressors, HFOV- no autopsy
P-19	First 2 tests <252	Testing ressuring (lymphocyte and T cell subsets); PID unlikely	Transferred back to referral hospital, doing well at 1 year of age in follow up
P-20	<252, 364, 311, 364, 950	Testing reassuring (lymphocyte and T cell subsets), no note or formal recommendations found in chart	Last follow up at 4 yrs old with cerebral palsy, global developmental delay, seizure disorder. No immune issues.
P-21	<252 x2, 395	Testing reassuring (lymphocyte and T cell subsets, mitogens), PID unlikely	Discharged to another hospital, no follow up available
P-22		Not consulted. Testing sent included immunoglopbulins, lymphocyte subsets, neutrophil oxidative index, all normal.	Recovered and transferred back to referral hospital
P-23	Normal by report	IgG replacement not recommended. No further immune evaluation recommended.	Died from nephrotic sydrome with severe lung disease
P-24	Initial normal, then low	Testing reassuring (mild T cell lymphopenia with normal naïve % and normal mitogen testing); PID unlikely	Died at 9mos from severe BPD
P-25	Normal, then <252 x2	Testing reassuring (slightly low T cells but normal naïve % and good mitogen responses), recommended outpatient follow up	Transferred back to referral hospital in another state
P-26	Normal, then <252 repeatedly	T cell lymphopenia, low switched B cells and absent response to anti-CD3 mitogen. Recommended repeating labs once ALC higher, they were similar but patioent died that week.	Died from Klebsiella sepsis; whole exome sequencing sent before death suggestive of novel genetic disease that may have immune system effects, investigation underway
P-27	Low TRECs x 2	Testing abnormal (low T cells, low recent thymic emigrants). Recommend sending mitogen testing, was not sent.	Patient transferred back to home facility, additional outcomes unknown.
P-28	<252 x3, 295	Testing reassuring (immunoglobulins, lymphocyte and T cell subsets, neutrophil oxiadtive index, T cell mitogens); PID unlikely	Died from severe lung disease
P-29	Normal	Testing slightly abnormal (low CD8 T cells, low naïve %, but total T cell numbers normal and CD4 normal) but felt not consistent with PID, no further testing recommended.	Died after redirection of care toward comfort measures in setting of evolving periventricular leukomalacia