

Test Selection Guide



BIOCHEMISTRY

Acceptable Test Groupings
Approved Abbreviations in Parenthesis

Blood Gases

- PO₂
- PCO₂
- pH
- HCO₃
- base excess
- O₂ saturation

Electrolytes (E)

- Sodium (Na)
- Potassium (K)
- Bicarbonate (HCO₃)
- Chloride (Cl)

Immunoglobulins

- IgG
- IgM
- IgA

Lipid Studies

- Cholesterol (CHOL)
- Triglycerides (TRIG)
- High density lipoprotein cholesterol when specifically requested (HDL)
- Low density lipoprotein (LDL)

Liver Function Tests (LFT)

- Total Bilirubin (BILL.T)
- Conjugated Bilirubin (BILL.D)
- Alkaline Phosphatase (ALP)
- Gamma Glutamyl Transferase (GGT)
- Alanine Amino Transferase (ALT)
- Aspartate Amino Transferase (AST)
- Albumin (ALB)
- Globulins
- Total Protein

Abnormal Protein Investigation

- Serum Protein Electrophoresis
- Cryoglobulins/Cryofibrinogen
- Immunoglobulin Quantification
- Immunofixation Studies
- Bence Jones Protein
- Serum Free Light Chains

Calcium Metabolism

- Serum Calcium
- Serum Phosphate
- Serum Magnesium
- Parathyroid Hormone
- Serum 25 Hydroxy Vitamin D

Drug Screen

- Immunoassay
 - Cannabinoids
 - Benzodiazepines
 - Cocaine
 - Sympathomimetic Amines
 - Opiates
 - Methadone (as requested)
 - Barbiturates (as requested)
 - Ethanol (alcohol, as requested)
- GCMS confirmation
 - LCMS confirmation
 - Cannabinoids
 - Benzodiazepines
 - Cocaine
 - Sympathomimetic Amines
 - Opiates

Gastrointestinal

- 24hr Urinary 5HIAA
- Plasma Serotonin
- Serum Gastrin
- Helicobacter pylori breath test
- Faecal reducing substances
- Faecal elastase
- Faecal calprotectin
- Lactose Tolerance Test (blood)
- Lactose tolerance test (breath)
- Fructose tolerance test (breath)

Markers of Heart Disease

- Troponin I (myocardial infarction, ischaemia)
- BNP (heart failure)

Miscellaneous

- Porphyrins:
 - Blood, Urine, Faeces
- Ammonia & Lactate
- Metabolic Disease Screen
- Urine & Serum Osmolality
- Glucose Tolerance Test
- HbA_{1c}/Fructosamin e
- Amylase/Lipase
- Alkaline Phosphatase Isoenzymes
- Urinary Catecholamines
- Homocysteine
- Red cell folate
- Creatine Kinase
- Lactate dehydrogenase

Iron Studies

- Serum iron
- Serum transferrin
- Transferrin saturation
- Serum ferritin

Renal Function

- Serum Urea
- Creatinine Clearance
- Serum Creatinine
- Serum Urate
- 24 hour urine protein
- Protein / Creatinine ratio on spot urine specimen
- Albumin/Creatinine ratio (ACR)
- 24 hour or timed overnight urine albumin

Specific Protein Quantitation

- C3
- C4
- Alpha-1 antitrypsin
- Haptoglobin
- Caeruloplasmin
- ACE (Angiotensin Converting Enzyme)
- APO A1
- APO B

Toxicology

- Urine drug screen
- Red Cell & Serum Cholinesterase (organophosphates)
- Carboxyhaemoglobin
- Methaemoglobin
- Cotinine (nicotine metabolite in serum or urine)

Trace Metals

- Lead (whole blood)
- Zinc
- Copper
- Arsenic
- Cadmium
- Mercury

Tumour Markers

(Generally not useful for cancer screening except for FOBT and possibly PSA)

Prostate

- PSA

Breast

- CA 15-3
- CEA

Neuroendocrine

- Chromogranin A

Ovary

- CA125
- CA19-9

Colon

- FOBT (the immunochemical method requires no diet or drug adjustments)
- CEA
- CA19-9

Therapeutic Drug Monitoring

Analgesics

- Salicylate
- Paracetamol

Antibiotics

- Amikacin
- Gentamicin
- Tobramycin
- Vancomycin

Antiepileptics

- Carbamazepine
- Clonazepam
- Lamotrigine
- Gabapentin
- Vigabatrin
- Phenobarbitone
- Phenytoin
- Primidone
- Valproate

Antineoplastic

- Methotrexate

Bronchodilators

- Theophylline

Cardiac

- Digoxin
- Quinidine
- Perhexilene
- Amiodarone
- Flecainide

Immunosuppressive

- Cyclosporine
- Tacrolimus (FK506)
- Sirolimus (Rapamycin)
- Everolimus
- Mycophenolic acid

Vitamins

- Vitamin A
- Vitamin E
- Vitamin B1
- Vitamin B2
- Vitamin B6
- Vitamin B12
- Vitamin C
- Vitamin D

Serum folate

Psychoactive

- Benzodiazepines
 - clobazam
 - clonazepam
 - diazepam
 - nitrazepam
 - oxazepam
 - temazepam
- Clozapine
- Thioridazine
- Fluoxetine
- Olanzapine
- Lithium
- Tricyclics
 - amitriptyline
 - clomipramine
 - desipramine
 - doxepin
 - imipramine
 - nortriptyline
 - trimipramine

CYTOLOGY/HISTOLOGY

Gynaecological Cytology

- Cervical Smear
- Vaginal Smear
- Vulval Smear
- HPV DNA Testing
- SurePath / ThinPrep

Non Gynaecological Cytology

Respiratory

- Sputum
- Bronchial Brushings
- Bronchial Washings
- Bronchoalveolar Lavage

Body Fluids

- Pleural Fluid
- Ascitic/Peritoneal Fluids
- Peritoneal Washings
- Pericardial Fluid
- Synovial Fluid
- Ovarian Fluid
- Gastric Fluid
- Cyst Fluids
- Cerebrospinal Fluid

Urinary Tract

- Bladder Washings
- Urine
- Ureteric Washing

Fine Needle Aspirate

- Breast
- Liver
- Lung
- Lymph Node
- Pancreas
- Parotid
- Prostate
- Soft Tissues
- Superficial Palpable or Deep Lumps
- Thyroid

Miscellaneous

- Nipple Discharge
- Oral Cavity Smears
- Semen
- Bile duct

Histology

Tissue and Biopsy Specimens

- Routine Tissue Diagnosis
- Immunoperoxidase Stains
- Immunofluorescence
- Frozen Section
- DISH
- Photography (macroscopic/microscopic)
- Expert second opinion

GENETICS

Cytogenetics

Chromosome Karyotyping

- Prenatal
- Postnatal
- Oncology
- Products of conception

Chromosome Microarray

- Postnatal
- Microdeletion syndromes
- Products of conception
- Prenatal (requests from specialists only in consultation with Genetic Pathologist or Cytogeneticist in charge)
- Haematological Oncology

Fluorescent In Situ Hybridisation (FISH)

- Microdeletion syndromes
- Aneuploidy screening
- Telomere screening
- Haematological oncology
 - Fusion probes for common haematological malignancies, e.g. t(9;22) bcr/abl
 - Multiple myeloma panel
 - CLL panel
- Solid tumour oncology-Paraffin tissue studies
 - Her2/Neu
 - ALK
 - Oligodendroglioma
 - Lymphoma

Molecular Genetics

Inherited Haematological Disorders

- Alpha thalassaemia genetic testing
- Factor V Leiden
- Prothrombin G20210A
- Haemochromatosis (C282Y, H63D & S65C)

Haematological Oncology

- BCR/ABL
- FLT3 & NPM1
- Janus Kinase (JAK2)
- Calreticulin (CALR)
- B-cell IgH gene rearrangement
- T-cell Receptor gene rearrangement
- Bcl-1 & Bcl-2
- Thrombopoietin Gene (MPL)

Pharmacogenetics

- Individual gene testing of tumours for BRAF, KRAS, NRAS, EGFR to evaluate eligibility for treatment with targeted therapies
- Tumour molecular profiling (simultaneous testing of multiple tumour gene variants for therapeutic or prognostic evaluation, or for clinical trial evaluation)
- TPMT

Inherited Immunological Disorders

- Coeliac disease HLA genotyping
- HLA-B27

Respiratory

- Cystic fibrosis
- Alpha1-Antitrypsin (S & Z)

Fertility and Development

- Y Chromosome Microdeletion Analysis (AZFa, AZFb, AZFc) for male infertility
- Sex-determining region of the Y chromosome (SRY)
- Fragile X Syndrome
- Non-invasive prenatal aneuploidy testing Generation NIPT

Inherited Cancer Genetic Testing

- Inherited breast and ovarian cancer
 - BRCA1
 - BRCA2

- Inherited bowel and uterine cancer (Lynch Syndrome)

- MLH1
- MSH2
- MSH6
- APC
- MYH

Cardiovascular

- MTHFR Mutation
- Apolipoprotein E Genotyping

SCN1A gene testing - Seizure disorders and familial hemiplegic migraine

Gilbert Syndrome

Non Medical testing:

Parentage and relationship testing

Andrology

- Seminal Analysis
- Antisperm Antibodies



ENDOCRINOLOGY

Adrenal Function

Cushing's

- Cortisol + ACTH
- 24hr Urinary Cortisol
- Overnight Dexamethasone Suppression Test
- Bedtime Salivary Cortisol

Addison's

- Cortisol + ACTH
- Synacthen Stimulation Test

Amenorrhoea

- Pregnancy Test
- Oestradiol
- LH:FSH
- Prolactin

Bone Turnover markers

- CTX (c-telopeptide)
- P1NP (type 1 procollagen amino-terminal-propeptide)

Calcium Homeostasis

- Parathyroid Hormone (PTH)
- Calcium + Albumin + Ionised Calcium
- Random Urinary Calcium Clearance

Diabetes

- Fasting and random glucose
- Glucose tolerance test
- C Peptide
- Insulin
- GAD antibodies
- Insulin autoantibodies

Down's Screen

- First Trimester (11 -13 wks 6 days)
- Second Trimester including Spina Bifida Screen (15-18 wks is best but can be done at 14-22 wks)
- Generation NIPT Maternal Serum DNA test (10 -20 weeks)

Growth

- Growth Hormone
- Insulin like growth factor (IGF)1 (somatomedin)

Hirsutism

- Testosterone
- Free testosterone
- 17 hydroxy progesterone
- Urine steroid profile
- LH:FSH
- DHEA Sulphate
- Oestradiol
- Androstenedione
- SHBG

Hypertension

- Renin + Aldosterone
- 24 hour Urine Catecholamines
- Plasma and urine metanephrines

Thyroid Function Tests (TFT)

- Only TSH will be measured if "TSH" is requested.
- If "TFTs" are requested FT4/FT3 will only be measured if the TSH is abnormal or the request form states:
 - Patient has thyroid disease
 - Patient is taking drugs affecting thyroid function
 - For investigation of dementia or psychiatric illness
 - For investigation of amenorrhoea or infertility
- Thyroid Antibodies
 - antithyroglobulin and anti thyroid peroxidase - Autoimmune Thyroid Disease
 - TSH Receptor Ab - Graves' Disease
 - Thyroglobulin - Thyroid Carcinoma

IMMUNOLOGY

Allergic Disorders

- Total IgE
- Specific IgE (RAST) – single allergens (recommended) or panel (max. 4 per request)
- Serum tryptase

Immunodeficiency

- IgG
- IgA
- IgM
- IgE
- C3 & C4
- Complement function
- C1 esterase inhibitor level and function
- Serum electrophoresis
- Lymphocyte subpopulations
- As indicated
 - Neutrophil function
 - Lymphocyte function

Autoimmune Disease

Arthritis

- CRP
- Anti-CCP
- RF
- ANA
- dsDNA
- ENA
- HLA-B27
- ANCA

Systemic Lupus Erythematosus

- ESR
- ANA
- dsDNA
- ENA
- C3, C4

Antiphospholipid syndrome

- Cardiolipin antibody
- B2-glycoprotein 1
- Lupus anticoagulant

Dermatomyositis/ Polymyositis

- ANA
- ENA (Jo-1 antibodies)
- Myositis line blot (includes Mi- 2, Ku, PM-Scl 100 and 75, Jo-1, SRP, PL-7, PL-12, EJ, OJ, Ro52)

Bullous skin disease

- Skin autoantibodies

Vasculitis

- ANCA (includes anti-myeloperoxidase and anti-proteinase 3 antibodies)
- GBM antibodies
- Cryoglobulins

Systemic sclerosis/scleroderma

- ANA
- ENA (Scl-70 and CENPB antibodies)
- Systemic sclerosis/ scleroderma line blot (includes Scl-70, CENPA and CENPB, RNA Pol 1 and 3, Fibrillar, Nor-90, Th/To, PM-Scl 100 and 75, Ku, PDGFR, Ro-52)

Endocrine disorders

- (as indicated clinically)
- Gastric parietal cell and intrinsic factor antibodies
- Insulin antibodies
- GAD/IA2 antibodies
- Thyroid antibodies
- Ovarian/testicular antibodies
- Adrenal antibodies

Renal disease (depending on clinical scenario)

- C3 nephritic factor
- Antiphospholipase A2 receptor antibodies

Organ specific autoimmunity

- Liver/gastrointestinal disease
- Smooth muscle antibody
- F-actin antibodies
- Antimitochondrial antibody
- AMA-M2
- LKM antibody
- ANA
- ANCA
- Coeliac antibodies (includes IgA tissue transglutaminase and IgG deamidated gliadin peptide antibodies)

Nervous system autoimmunity

- Antineuronal antibodies (includes anti-Hu, Ri, Yo antibodies)
- NMDA Receptor antibodies
- Voltage Gated Potassium Channel antibodies
- Voltage Gated Calcium Channel antibodies
- NMO-IgG
- GAD antibody
- Acetylcholine receptor antibodies
- Muscle specific kinase antibodies
- Ganglioside antibodies
- Anti-MAG antibodies

HAEMATOLOGY/BLOOD BANK

Dorevitch Pathology Warfarin Care Clinic Patient Registration (03) 9244 0200

Acceptable Test Groupings

Approved Abbreviations in Parenthesis

Full Blood Examination (FBC, FBE, CBE, CBC)

- Haemoglobin (Hb)
- Red Cell Indices
- Leucocyte Count (WBC)
- Differential Leucocyte Count
- Platelet Count
- Blood Film Examination (as determined)

Thalassaemia/ Haemoglobinopathy Screen

Strongly suggest requesting for Iron Studies when asking for HbE

- Full Blood Examination (FBE)
- Hb Electrophoresis
- Iron Studies

Coagulation Screen (COAG)

Includes:

- PT/INR
- APTT
- Platelet Count
- Fibrinogen

Cross Matching

Includes test for Rh and/or other blood group antibodies.

Bone Marrow Examination

Please state if cytogenetics and/or cell markers are required.

Suggested tests for common haematological disorders from which a selection may be made. These tests must be requested individually.

Leukaemia/Lymphoma

- FBE
- Bone Marrow Examination
- Cytogenetics
- Molecular Genetics
- Cell surface markers as indicated.

Polycythaemia

- EPO
- JAK-2
- Calreticulin

Anaemias

Haemolytic

- FBE/Retics
- Bilirubin/LDH
- Haptoglobin
- Coombs test
- Urinary haemosiderin

Where indicated:

- Cold Agglutinins
- ANA
- G6PD
- Unstable Hb (Hb Electrophoresis)
- PNH (Paroxysmal Nocturnal Haemoglobinuria) Screen
- Flow cytometry screening for hereditary spherocytosis.

Macrocytic

- FBE/Retics/Coombs Test
- LFT
- Folate/B12
- TSH

Where necessary:

- Intrinsic Factor Abs
- Bone Marrow Examination
- Parietal cell antibody
- Fasting serum gastrin

Microcytic

- FBE/Retics
- Iron Studies

If unhelpful consider Haemoglobinopathy, Thalassaemia

Normocytic

- FBE/Retics
- Serum Folate
- Holotranscobalamin (Active B12)
- E/LFT
- EPG
- TSH
- ANA
- LH/Testosterone (Males)

Where indicated:

- Bone Marrow Examination

Leucocyte Disorders

Neutrophilia

- CRP
- Where indicated:*
- Bone Marrow Biopsy
- BCR - ABL
- Blood culture
- JAK-2

Neutropenia

- FBE/Retics
- B12/Folate
- LFTs
- Viral Studies
- ANA

Where indicated:

- Bone Marrow Examination

Eosinophilia

- Faecal O/C/P
- IgE
- Serology for parasites e.g. strongyloides

Lymphocytosis

- Lymphocyte Surface Markers
- Viral antibody tests
- TFT

Immunoproliferative Diseases

- Serum protein electrophoresis
- Immunofixation
- Quantitation of Immunoglobulins
- Bence Jones Protein
- Bone Marrow Examination
- Lymphocyte Marker Studies
- B2 Microglobulin

Thrombocytosis

- CRP
 - Iron Studies
 - JAK-2
 - Calreticulin
 - Faecal Occult Blood
 - BCR/ABL
- Consider Bone Marrow

Thrombocytopenia

- FBE
- Viral Studies (as indicated)
- ANA/ACLA
- Lupus Anticoagulant
- PT/APTT/Fibrinogen
- D-Dimer
- LFT

Coagulation

Anticoagulant Control Oral Therapy

- Prothrombin Time/INR
- Unfractionated Heparin**
- APTT
- Therapeutic range 60-95 seconds for continuous infusion or intermittent therapy (sample collected 30-45 minutes before next injection).

LMWH (Anti-Xa) + DOACS (Direct Oral Anticoagulants)

- Monitoring is rarely needed.

Haemorrhagic Disorders

If abnormal coagulation screen or if significant family/clinical history of bleeding, Von Willebrand's Disease or other deficiency states may be considered:

- F VIII:C
- vWF:Ag
- vWF:RiCoF

If required:

- Collagen Binding Assays
- Other specific factor assays as indicated.
- Platelet Aggregation Studies
- Circulating Inhibitor Tests

Recurrent Thrombosis/ Thrombophilia

- FBE
- APTT/PT/Fibrinogen
- Antithrombin
- Lupus Inhibitor
- ANA
- Protein C/Protein S
- Plasminogen
- Cardiolipin Antibodies
- APC Resistance
- Factor V Leiden/Prothrombin G20210A Mutation
- B2-microglobulin



MICROBIOLOGY, MICROBIAL MOLECULAR BIOLOGY & SEROLOGY

Notes

Clinical history (especially recent travel) is very important. Please request tests individually (profiles not acceptable) and include the nature and site of the specimen. Some serological tests can be diagnostic on testing of acute phase serum (e.g. detecting IgM antibodies), while some tests require paired sera 14 days apart.

Antenatal Screening (ordered separately)

- Hepatitis B
 - Hepatitis C
 - HIV
 - Rubella
 - Syphilis
 - *Chlamydia trachomatis* (PCR, Aptima) routinely for <25 y.o, other age groups as indicated)
 - If clinically indicated, serology for
 - CMV
 - *Toxoplasma gondii*
 - Parvovirus B19
 - VZV (if no history of infection or adequate vaccination)
- * Clinical Practice Guidelines - Antenatal Care, 2012

Central Nervous System Infections

CSF workup

- Total and differential cell count
- Glucose and protein concentration
- Microscopy (wet-prep and Gram stain)
- Bacterial and fungal culture

Depending on clinical presentation, epidemiology and CSF results:

- Cryptococcal antigen + India ink microscopy
- *N.meningitidis* and/or *S.pneumoniae* PCR (DHS approval required for meningococcal PCR)
- *S.pneumoniae* antigen
- PCR for HSV1/2, VZV, Enterovirus, Parechovirus, Flaviviruses; other viruses (d/w Clinical Microbiologist)
- *M.tuberculosis* PCR and culture

Serology

- Flaviviruses, Alphavirus
- Syphilis (blood and, if positive, on CSF)
- *T.gondii*
- Other tests: d/w Clinical Microbiologist

Cardiovascular Infection

- Blood cultures (3 sets; if ?endocarditis, request extended incubation)

Serology:

- Q Fever
- Toxoplasmosis
- Syphilis
- *Chlamydia psittaci* (exposure to birds)
- *Legionella* spp. (consider PCR)
- *Bartonella henselae* (exposure to cats)

PCR:

- Enterovirus (coxsackievirus): throat swab, faeces
- Adenovirus (throat swab)
- Respiratory viruses (multiplex PCR)

Screening for Congenital Infections (after birth)

Infant

- CMV: Serology + Urine PCR
- Rubella: Serology + Nasal PCR
- HSV 1 & 2: Serology + Lesion or Blood PCR
- Toxoplasma Serology
- Syphilis Serology (IgM)

Mother

- Serology after or near delivery
- CMV, Rubella, HSV, Toxoplasma, Syphilis
- Other agents: d/w Clinical Microbiologist

Diarrhoea

Faeces

- Rotavirus PCR
- Microscopy & Bacterial Culture x 1
- Ova, Cysts, Parasites x 2
- *Clostridium difficile* culture & Toxin PCR (antibiotic associated diarrhoea)
- Adenovirus PCR (outbreaks)
- Norovirus PCR (outbreaks)
- Faecal multiplex PCR

Genital Tract Infections

- Test for all STIs: HepBsAg, HIV, Syphilis, HSV Serology, *N.gonorrhoeae* and *C.trachomatis* PCR/Aptima

Genital / Anal Lesion

- HSV 1 & 2 PCR
- Syphilis PCR
- Syphilis Serology
- *C.trachomatis* PCR/Aptima (LGV)
- Microscopy and Culture

Genital Discharge

- *Mycoplasma/ureaplasma* culture or PCR (if clinically indicated)
- *C.trachomatis* PCR/Aptima
- Gonococcal PCR/Aptima
- Microscopy & Bacterial Culture
- *Trichomonas vaginalis*

Non-Specific Urethritis

- *Mycoplasma genitalium* PCR
- *Trichomonas vaginalis* microscopy and PCR
- *Ureaplasma* culture or PCR
- Adenovirus and HSV PCR

Interpretation of Hepatitis B Serology

Pattern	HBsAg	HBeAg	HBcAb	HBc-IgM	HBeAb	HBsAb	Infective
Early Acute	+	+					++
Acute	+	+	+	+			++
Resolving			+	+	+/-	+/-	+/-
Past			+		+/-	+	-
Chronic	+	+/-	+		+/-		++
Post Immunisation						+	-

Hepatitis A, B, C

Please request specific tests

Acute Hepatitis

- Hep A IgM
- HepBsAg
- HCV serology

Infectivity Status/Chronic Hepatitis

- HBsAg, HepBcore antibody, HBsAb
- HCV serology

Immunity

- HBsAb
- Hep A Total (IgM only if indicated)

Other Hepatitis Serology

- *E.histolytica*
- *Brucella* spp.
- CMV
- EBV
- Hep E (travellers or when no other causes found in non travellers)
- Hydatid
- *Leptospira* spp.
- Q Fever
- Hep D (only if positive for Hep B)
- *Mycoplasma pneumoniae*

MICROBIOLOGY, MICROBIAL MOLECULAR BIOLOGY & SEROLOGY

Lymphadenopathy/Atypical Lymphocytes in blood

- Serology
 - EBV
 - Syphilis
 - CMV
 - Rubella
 - Parvovirus
 - *Brucella* spp.
 - HIV
 - *Toxoplasma gondii*
 - HHV6 (child)
 - Mumps
 - Cat Scratch Disease (CSD)

Pyrexia of Unknown Origin (PUO)

- Blood Cultures x 3
- Urine Microscopy & Culture
- Malarial Films & ICT (if travel) x 3
- Culture of any lesion / exudate
- Sputum Microscopy & Culture
- Sputum (+/- urine) AFB Microscopy & Culture
- Serology
 - HIV
 - Ross River virus
 - CMV
 - Barmah Forest virus
 - Q Fever
 - *Mycoplasma pneumoniae*
 - Rickettsiae
 - *Toxoplasma gondii*
 - *Leptospira* spp.
 - *Brucella* spp.
 - Dengue (travel/QLD)
 - Cat Scratch Disease
 - Chikungunya & Zika virus (travel)
 - Respiratory Virus PCR (influenza)
 - Atypical pneumonia PCR (*M.pneumoniae*, *Chlamydia* spp., *Legionella* spp.)
 - MERS CoV (travel) - contact DHS urgently

Generalised Rash

Vesicular

- HSV 1 & 2 PCR
- VZV PCR
- Enterovirus PCR (Throat swab, skin lesions)
- Microscopy & Culture for Bacteria
- Serology
 - HSV IgG and IgM
 - VZV IgG and IgM
 - Rickettsiae
- Blood Cultures x 2 if febrile

Non-vesicular

- PCR:
 - Dengue, Chikungunya, Zika (history of travel to risk areas)
 - Enterovirus (blood or throat swab)
 - Measles (blood/urine/throat swab)
- Skin scraping for dermatophytes
- Serology
 - Rubella
 - HIV
 - Ross River Virus
 - Parvovirus
 - Barmah Forest Virus
 - Syphilis
 - Measles
 - EBV
 - CMV
 - Rickettsiae
 - ASOT/ Anti DNase B
 - Dengue (travel/QLD)
 - Chikungunya & Zika virus (travel)
- Blood Cultures x 2 if febrile

Petechial rash

- Blood Cultures x 2
- Enterovirus PCR (Throat swab)
- Rickettsiae Serology
- Meningococcal PCR (plasma)

Urinary Tract Infections

- Urine Microscopy & Culture
- Blood Cultures x 2 if febrile

Respiratory Tract Infections

Depending on clinical findings & history

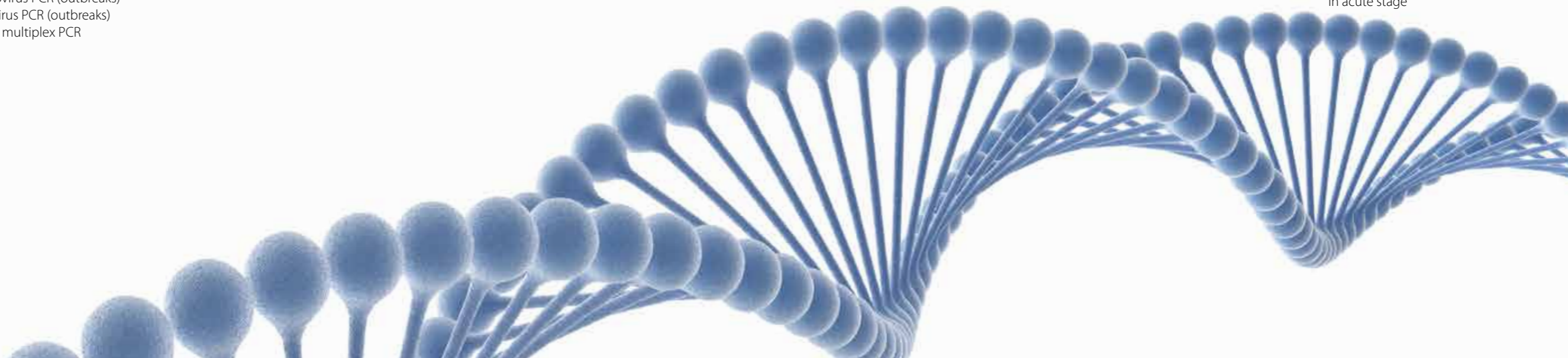
- Bacterial Culture (Throat swab) if tonsillitis
- Sputum Microscopy & Culture
- Blood Cultures x 2
- *Bordetella pertussis* PCR (Nasopharyngeal swab or Aspirate)
- Respiratory Virus PCR (Nasal swab/Nasopharyngeal swab or Aspirate)
 - Influenza A & B
 - RSV
 - Parainfluenza 1 - 3
 - Human Metapneumovirus (children/elderly)
 - Adenovirus (Throat/Nasal/Nasopharyngeal swab or aspirate)
 - Other respiratory viruses e.g. Rhinovirus
- Serology (paired sera recommended)
 - *Bordetella pertussis*
 - *Mycoplasma pneumoniae*
 - *Legionella* spp.
 - Q Fever
 - *Chlamydia* group, specifically *C.psittaci*
- *Legionella* Urinary Antigen (Urine)
- *S.pneumoniae* Urinary Antigen
- With Lymphadenopathy
 - EBV
 - HIV
 - CMV
 - Syphilis

Lower RTI - Non-resolving

- Sputum Microscopy & Culture for Bacteria & Fungi
- Sputum Microscopy & Culture x 3 AFB (consider Gene-Xpert TB testing, contact Clinical Microbiologist)
- Atypical pneumonia PCR (*Chlamydia* spp., *Mycoplasma pneumoniae*, *Legionella* spp.)
- Sputum Malignant Cells x 3
- Sputum Eosinophils & Serum IgE
- Cryptococcal Ag (Serum)
- Fungal Precipitins
- HIV
- BAL (Bronchial Alveolar Lavage)
 - Discuss with Clinical Microbiologist

Arthritis /Arthralgias +/- Fever +/- Rash

- Blood Cultures x 2 if febrile
- Joint Aspirate Crystals, Microscopy & Culture
- Consider *N.gonorrhoeae* PCR/Aptima
 - Joint Fluid & Urine
- Serology
 - Parvovirus
 - Hep A, B, C
 - Ross River Virus
 - HIV
 - Barmah Forest Virus
 - Syphilis
 - Measles
 - ASOT / Anti DNase B
 - Rubella
 - EBV
 - Dengue (travel/QLD)
 - Lyme Disease (travel)
 - Chikungunya & Zika virus (travel)
- Consider
 - *Neisseria gonorrhoeae* PCR
 - *Mycoplasma hominis* culture
 - *Ureaplasma urealyticum* culture or PCR
 - Dengue/Chikungunya/ Zika virus (travel risk areas) PCR in acute stage



PATHOLOGISTS

ANATOMICAL PATHOLOGY

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Dr Peter Kelley	(03) 9244 0262
Dr Roy Chean	(03) 9244 0289
Dr Sarah Garner	(03) 9244 0339
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Dr Jack Metz	(03) 9244 0226
Dr Jennifer Brotchie	(03) 5563 1515
Dr Linda Rose	(03) 9244 0481
Dr Michael Gilberton	(03) 8345 1485
Dr Modisha Peiris	(03) 9244 0385
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MELBOURNE & PENINSULA

Beleura Private Hospital - Mornington	(03) 5975 6900
Frankston Hospital	(03) 9784 7555
John Fawcner Hospital - Moreland	(03) 9386 5361
Knox Private Hospital	(03) 9210 7371
Peninsula Private Hospital - Frankston	(03) 9789 2567
South Eastern Private Hospital - Noble Park	(03) 9558 4360
The Avenue Private Hospital - Windsor	(03) 9510 1433
Warrigal Medical Centre - Heidelberg	(03) 9458 1313
Werribee Mercy Hospital	(03) 9216 8655
Western Health - Footscray	(03) 8345 7272
Western Health - Sunshine	(03) 8345 1485

GIPPSLAND

Bairnsdale Regional Health Service	(03) 5150 3475
Bass Coast Regional Health - Wonthaggi	(03) 5671 3292
Central Gippsland Health Service - Sale	(03) 5143 8630
Gippsland Southern Health - Leongatha	(03) 5667 5573
Latrobe Regional Hospital - Traralgon West	(03) 5174 0800
West Gippsland Hospital - Warragul	(03) 5623 0780

NORTH EAST

Albury Base Hospital	(02) 6041 5375
Albury/Wodonga Specialist Centre	(02) 6023 7300
Benalla & District Memorial Hospital	(03) 5760 2277
Shepparton Private Hospital	(03) 5821 3460
Wangaratta Private Hospital	(03) 5722 9025
Wangaratta Public Hospital	(03) 5722 5215
Wodonga Hospital	(02) 6051 7688

WEST

Ballarat Base Hospital	(03) 5320 4451
Bendigo Laboratory	(03) 5430 0900
Camperdown Hospital	(03) 5593 7373
East Grampians Health Service - Ararat	(03) 5352 9338
Hamilton Base Hospital	(03) 5571 2952
Maryborough Health Service	(03) 5460 5763
Warrnambool Base Hospital	(03) 5563 1518