



Lab information

Diagnosis	Test procedure
CARDIOVASCULAR	
Coronary heart disease (CHD)	Heart attack risk check (PROCAM score): HDL-cholesterol (S), homocysteine (NaF), hsCRP (S), LDL cholesterol (S), lipoprotein (a) (S), triglycerides (S), infarction diagnosis: CK (S), CK-MB (S***), troponin (S), calcium (S), CRP (S), potassium (S), magnesium (S), myoglobin (S***)
Heart failure	NT-proBNP (S) , calcium (S), urea (S), potassium (S), creatinine (S), sodium (S), TSH (S)
Hypertension, essential	CBC with differential (EB) , total protein (S), potassium (S), creatinine (S), sodium (S), proteinuria analysis (albumin, IgG, α 1-microglobulin, creatinine) (D), urinalysis (U), cholesterol (S), GFR using MDRD, more accurate: cystatin C (S), glucose (NaF), uric acid (S), urea (S), see PROCAM score for CHD, triglycerides (S). Testing for secondary hypertension: aldosterone/renin ratio, catecholamines (U), metanephrines (EP***)
Hypotension	Diagnosis by exclusion: ACTH (EP), ACTH test (excluding Addison's disease), diurnal cortisol profile (S), TSH (S) (excluding hypothyroidism)
ENDOCRINE, METABOLIC	
Hyperlipidaemia	Cholesterol (S) , glucose (NaF), HDL cholesterol (S), LDL cholesterol (S), lipid electrophoresis (S), lipoprotein (a) (S), triglycerides (S), TSH (S), apolipoprotein A1 (S), apolipoprotein B (S), apolipoprotein ratio
Type II diabetes mellitus (NIDDM)	Glucose (fasting and postprandial) (NaF) , diurnal glucose profile (NaF), oral glucose tolerance test (OGTT) (NaF), HbA1c (EB), insulin (S***), cholesterol (S), C-peptide (S***), pathogen and resistance (U), GAD-Ab (S), glucose (U), uric acid (S), HDL cholesterol (S), IA2-Ab (S), islet cell Ab (S), insulin Ab (S), ketones (U), LDL cholesterol (S), microalbumin (U), proinsulin (S***), triglycerides (S)
Gout	CRP (S) , protein electrophoresis (S), uric acid (S + U), creatinine (S), crystals (GP), urinalysis, pathogen and resistance (GP), synovial fluid (GP) if applicable, CBC with differential (EB), urea (S)
Thyroid dysfunction	Free T3 (S) , free T4 (S), TSH (S), anti-thyroid peroxidase Ab (anti-TPO, MAbs) (S), TSH receptor Ab (TRAb) (S), TRH test as applicable, anti-thyroglobulin Ab as applicable (anti-Tg, TAb) (S)
Obesity	Cholesterol (S) , HDL cholesterol (S), LDL cholesterol (S), triglycerides (S), adiponectin (S), cortisol (S), glucose (NaF), HOMA index (fasting glucose (NaF) and fasting insulin (S***)), proinsulin (S***), TSH (S)
Liver dysfunction	Albumin (S) , AP (S), bilirubin (S), cholinesterase (S), protein electrophoresis (S), total protein (S), GPT (S), GOT (S), γ GT (S), INR (Quick) (CP***), GLDH (S), IgA (S), IgG (S), IgM (S)
Osteoporosis	AP (S) , calcium (S), CRP (S) or ESR, gGT (S) , creatinine (S), phosphate (S), serum protein electrophoresis (S), TSH (S), calcium (U), β -CrossLaps (S), GPT (S), GOT (S), CBC with differential (EB), ostease (S), parathyroid hormone (EB), vitamin D3 (25-OH) (S)
UROGENITAL	
Renal failure, chronic	Calcium (S) , cystatin C (S), GFR from creatinine or cystatin C (S), total protein (S), CBC with differential (EB), potassium (S), creatinine (S), magnesium (S), sodium (S), phosphate (S), AP (S), cholesterol (S), CK (S), CRP (S), protein electrophoresis (S), EPO (S), ferritin (S), total protein (U), glucose (NaF), urea (S), INR (Quick) (CP***), parathyroid hormone (EB), proteinuria differentiation (U), PTT (CP***), triglycerides (S), urinalysis and sediment, vitamin D (S)
Prostatic hyperplasia (BPH)	PSA (S) or (cPSA), free PSA (S)
Erectile dysfunction	PSA (S) or (cPSA), free PSA (S)
Nephrolithiasis	Calcium (U) , cystine (U), magnesium (U), oxalate (U), phosphate (U), urinalysis, AP (S), calcium (S), pathogen and resistance (U), total protein (S), creatinine (S), uric acid (S), magnesium (S), phosphate (S)
GASTROINTESTINAL SYSTEM	
Pancreatic insufficiency, exocrine	Pancreatic elastase (F), lipase (S), oral glucose tolerance test (OGTT) (NaF)
Cholelithiasis	AP (isoenzymes as applicable) (L), bilirubin (S) , cholinesterase (S), γ GT (S), GPT (S), GOT (S), pathogens and parasites (F)
Gastroenteritis	α-amylase (S) , AP (S), calprotectin (F), chloride (S), CRP (S), CBC with differential (EB), urea (S), potassium (S), creatinine (S), sodium (S), pathogenic bacteria on three consecutive days (F), serum electrophoresis (S), albumin (F), α 1-antitrypsin (F), amoebae (F), clostridium difficile toxin (F), cryptosporidium (F), giardia (F), norovirus (F), rotavirus (F)
Gastroenteritis, diarrhoea, other non-infectious diseases	Calprotectin (F) , gliadin Ab (S), total IgA (S), pancreatic elastase (F), transglutaminase – other non-infectious Ab (S), type I diabetes clarification: GAD-Ab (S), IA2-Ab (S), islet cell Ab (S), insulin Ab (S)
Diarrhoea, acute	AP (S) , chloride (S), CRP (S), GOT (S), CBC with differential (EB), urea (S), potassium (S), lipase (S), sodium (S), pathogens (F), adenovirus (F), clostridium difficile toxin (F), cryptosporidia (F), giardia (F), norovirus (F), rotavirus (F), verotoxin detection (F)
Abdominal pain, acute abdomen	α-amylase (S) , AP (S), bilirubin (S), chloride (S), CRP (S), pathogen and resistance (U), CBC with differential (EB), GPT (S), GOT (S), γ GT (S), urea (S), β -HCG (S), INR (Quick) (CP***), potassium (S), LDH (S), lipase (S), sodium (S), PTT (CP***), Chlamydia trachomatis Ab (S), porphyrins (U), pathogenic bacteria on three consecutive days, especially campylobacter/yersinia (F)

General note: Pathogen and resistance Culture testing for localization-typical pathogens and resistance testing on clinically relevant isolates. Parameters in bold for any particular test represent basic diagnostics, those in ordinary print represent additional diagnostics. Any tests printed in normal lettering only refer to diagnostics where this distinction would not make sense.

Abbreviations: (S) = serum, (EB) = EDTA blood, (NaF) = sodium fluoride tubes, (CP) = citrate plasma, (EP) = EDTA plasma, (F) = faeces, (U) = urine, (SP) = sputum, (L) = CSF, (UAB) = urogenital swab, (RAB) = throat swab, (GP) = joint aspirate

***Please send frozen.



Diagnosis	Test procedure
INFECTION, IMMUNOLOGY	
Hepatitis	AP (S) , bilirubin (S), CBC with differential (EB), cholinesterase (S), CMV Ab (S), EBV Ab (S), protein electrophoresis (S), GOT (S), GPT (S), γ GT (S), HAV Ab (S), HAV IgM (S), HBc Ab (S), HBs Ab (S), HBs Ag (S) (if HBs Ag positive, test for HBV DNA (EB)), HCV Ab (S) (if HCV Ab positive, test for HCV RNA (EB)), INR (Quick) (CP***)
HIV/AIDS	CBC with differential (EB) , HIV I/II Ab (S) (if positive: HIV immunoblot as a confirmatory test; if HIV-positive: viral load, test for HIV-1 RNA (EB)), lymphocyte differentiation: CD3, CD4, CD8, CD16, CD19, CD56 (EB)
Sexually transmitted diseases	Chlamydia Ag/DNA using PCR (UAB) , Chlamydia trachomatis Ab (S), HIV Ab (S), TPPA (S) (if positive: test for syphilis Ab (EIA), VDRL + Syphilis IgM), syphilis Ab (S). If all findings negative: repeat each in one to three months. Pathogenic bacteria and gonococci, mycoplasma, ureaplasma (UAB)
Arthritis (infectious/post-infectious)	Suspected infectious/septic arthritis: CBC (EB) , blood cultures (BACTEC bottles), (infectious/post-infectious) CRP (S), pathogen and resistance (GP) as applicable, pathogen diagnostics (e.g. TB) (GP). Suspected rheumatic fever: anti-DNAse titre (S), ASL titre, blood cultures (BACTEC bottles), CRP (S), CBC with differential (EB), (anti-hyaluronidase titre (S) as applicable). Suspected post-infectious arthritis: borrelia Ab (S), yersinia Ab (S), campylobacter Ab (S), chlamydia Ab (S), salmonella Ab (S). Arthritis in viral infections: parvovirus Ab (S)
Rheumatic disease	ANA (S) (if positive: dsDNA and ENA), ESR (ESR tube), CCP Ab (S), CRP (S), ferritin (S), CBC with differential (EB), uric acid (S), rheumatoid factor (S), protein electrophoresis (S), ANCA (S), HLA-B27 (EB), C3/C4 complement (S), CH50 (S), circulating immune complexes (S***), differential diagnosis for infectious arthritis: see arthritis diagnosis
Vaccinations	B. pertussis IgG (S), TBE IgG (S), HAV-Ab (S), HBs-Ab (S), measles IgG (S), mumps IgG (S), pneumococcus Ab (S), rubella IgG (S), varicella IgG (S)
Myocarditis/Endocarditis	Myocarditis: ANA (S) , anti-DNAse (S), ASL (S), borrelia Ab (S), CK (S), CK-MB (S***), troponin (S), influenza virus Ab (S), adenovirus Ab (S), CMV Ab (S), coxsackie Ab (S), ECHO Ab (S), heart muscle Ab (S). Suspected endocarditis: blood cultures (BACTEC bottles)
Lymphotropic pathogens	Depending on localization: CMV Ab (S) , EBV Ab (S), toxoplasmosis Ab (S), adenovirus-32006 Ab (S), chlamydia Ab (S), HIV Ab (S), pathogens (RAB)
Neurotropic pathogens	Antibody specificity indices for the following parameters: borrelia Ab, TBE Ab, herpes 32006 simplex Ab, measles Ab, mumps Ab, rubella Ab, treponema Ab, varicella-zoster Ab (requiring a serum/CSF pair and albumin and IgG measurement from serum and CSF for each), oligoclonal bands (S, L), pathogen and resistance (S, L)
Susceptibility to infection	CRP (S) , CBC with differential (EB), IgA (S), IgG (S), IgG subclasses (S), IgM (S), lymphocyte subpopulation (EB) (including CD3, CD4, CD8, CD16, CD19, CD56), HIV screening test (S), complementary factors (e.g. C3, C4) (S)
RESPIRATORY SYSTEM	
Acute upper respiratory tract infection	Pathogen and resistance (RAB), pathogen and resistance (SP)
Allergic rhinitis	Total IgE (S), SX1 (S), with breakdown as applicable (optional panel 20 inhalation (S)), specific IgE (S), (CAP) based on clinical presentation and patient history (early bloom, cat, etc.)
Bronchial asthma	Allergen-specific IgE Ab (S) (CAP), total IgE (S), ECP (S), tryptase (S)
Bronchitis, acute (pneumotropic pathogens)	B. pertussis Ab (S), CRP (S), CBC with differential (EB), Mycoplasma pneumoniae Ab (S), RS virus Ab (S), pathogen and resistance (SP), adenovirus Ab (S), C. pneumoniae Ab (S), influenza virus Ab (S), legionella Ab (S), legionella Ag test (U), legionella culture (SP)
Bronchitis (pneumotropic pathogens)	CRP (S), B. pertussis Ab (S), CBC with differential (EB), Mycoplasma pneumoniae Ab (S), pathogen and resistance (SP), adenovirus Ab (S), C. pneumoniae Ab (S), influenza virus Ab (S), Legionella Ag test (U), legionella culture (SP), RS virus Ab (S)
COPD, chronic bronchitis	CRP (S), CBC with differential (EB), IgA (S), IgE (S), IgG (S), IgG subclasses, serum electrophoresis (S), pathogen and resistance (SP), α 1-antitrypsin (S) (α 1-antitrypsin genotyping as applicable (EB)), ECP (S)
Type I allergy	Allergen-specific IgE (S) (CAP), total IgE (S), CBC with differential (EB), allergen-specific IgG (S) (in hyposensibilization), flow CAST (EB)
OTHER	
Anaemia	Bilirubin (S) , CRP (S), ferritin (S), CBC with differential (EB), total protein (S), LDH (S), reticulocytes (EB), exclusion of blood loss through bowel, blood in stool: immunological haemoglobin-haptoglobin test, kidney: blood in urine urinalysis. Additional diagnostics for normocytic haemolytic anaemia: antibody test (EB), direct Coombs test (EB), haptoglobin (S), erythropoietin (S), exclude infectious anaemia. Additional diagnostics for microcytic hypochromic anaemia: iron (S), ferritin (S), soluble transferrin receptor (S), transferrin (S), transferrin saturation (S), haemoglobin differentiation (EB). Additional diagnostics for macrocytic hyperchromic anaemia: folic acid (S***), vitamin B12 (S) or holotranscobalamin (S), intrinsic factor Ab (S), parietal Ab (S)
Dementia, Alzheimer's	β -amyloid (1–42) (L), NSE (L), phospho-tau (L), protein S-100 (L), tau protein (L), exclude HIV encephalopathy, neurosyphilis, Wilson's disease (detailed test programme: see Bioscientia services catalogue)
Alcohol abuse	Blood count (MCV) (EB) , CDT (S), GOT (S), GPT (S), γ GT (S), triglycerides (S), vitamin B1 (EB***), vitamin B2 (EB), vitamin B6 (EP***), vitamin B12 (S), ethanol (S), protein electrophoresis (S)

The suggested panels do not claim to be exhaustive.