

LIST OF TEST IN PATHOLOGY DEPARTMENT, HOSPITAL KUALA LUMPUR (HKL)

NO.	TEST	PERFORMING LAB	CONTAINER	SPECIMEN TYPE	VOLUME	SCHEDULE	LTAT (Min/Hr/Day)	LOCATION	REMARK
1	Acetaminophen	Core Lab	Plain tube without gel (red cap)	Blood	4 ml	Daily	1 hour (Urgent) 1 day for external user	Kaunter Utama Jabatan Patologi	TDM form / PER-PAT 301 form (In-house)
2	Activated Partial Thrombin Time (APTT)	Core Lab	Sodium citrate tube	Blood	To fill up the tube with blood until indicated line.	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	To fill up the tube with blood until indicated line. Send to the laboratory as soon as possible (within 2 hours of sample collection).
3	Adenocorticotrophic Hormone (ACTH)	Special Chemical Pathology	EDTA tube	Plasma	3 ml	2 times / week	5 working days	Kaunter Utama Jabatan Patologi	Put in ice once blood drawn and send to the lab immediately. Use cold centrifuge to separate the plasma.
4	AFB Direct Smear	Microbiology	Sterile container	Sputum, Bronchoalveolar Lavage (BAL), Tracheal aspirate, Gastric Lavage, Bronchial Washing, Nasal Pharyngeal Aspirate	1 ml	Daily	1 day	Kaunter Utama Jabatan Patologi	TBIS 20C Form
5	Air sampling	Microbiology	Culture plate	Inoculated plate	Not applicable	By appointment	3 days	Microbiology lab	Done by Infection Control Staff
6	Alanine transaminase (ALT)	Core Lab SCACC Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
7	Albumin	Core Lab SCACC Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
8	Albumin Creatinine Ratio, Urine i) Urine albumin ii) Urine Creatinine	Core Lab SCACC Lab	Sterile urine container	First morning urine (preferred). Random urine is acceptable if a first-morning urine is not available	5 ml	Daily (Office hour)	1 working day 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
9	Albumin, Fluid	Core Lab	Plain container	Body Fluid	2 ml	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	Send to the laboratory as soon as possible.
10	Alkaline phosphatase (ALP)	Core Lab SCACC Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
11	Allergy Testing (Screening)	Microbiology	Plain tube	Blood	5 ml	Once a week	14 days	Kaunter Utama Jabatan Patologi	
12	Allergy Testing (Specific)	Microbiology	Plain tube	Blood	5 ml	Once a week	14 days	Kaunter Utama Jabatan Patologi	
13	Alpha Feto-Protein (AFP)	Core Lab	i) Blood: Plain tube with gel (yellow cap) ii) CSF & Body Fluid : Sterile container	Blood / CSF / Body Fluid	i) Blood: 3 ml ii) CSF & Body Fluid: 1 ml	Daily (Office hour)	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	
14	Alpha-1-Antitrypsin	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour)	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	
15	Amikacin	Core Lab	Plain tube without gel (red cap)	Blood	4 ml	Weekdays Office hours Weekend : 8:30 am - 12:30 pm	6 hours 1 day for external user	Kaunter Utama Jabatan Patologi	TDM form
16	Ammonia	Core Lab	EDTA tube	Blood	2 ml	Daily	1 hour (Urgent) 1 day for external user	Kaunter Utama Jabatan Patologi	Sample should be sent immediately in ice bath. Sample need to be processed within 60 minutes of collection sample.
17	Amylase	Core Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	
18	Amylase, Fluid	Core Lab	Plain container	Body Fluid	2 ml	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	Send to the laboratory as soon as possible.
19	Amylase, Urine	Core Lab	Sterile urine container / 24 hr Urine container	Random Urine / 24 hr urine	5 ml / 24 hr Urine collection	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	
20	Anemia i) Ferritin ii) Iron iii) UIBC / TIBC	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour)	2 working day 3 working days for external user	Kaunter Utama Jabatan Patologi	
21	Antibiotic sensitivity testing	Microbiology	Culture plate	Organism isolate	Not applicable	Daily	3 days	Kaunter Utama Jabatan Patologi	
22	Antifungal Susceptibility Test -yeast only)	Microbiology	Culture plate	Organism isolate	Not applicable	Daily	5 days	Kaunter Utama Jabatan Patologi	Only for sample from sterile site
23	Anti HBs EIA	Microbiology	Plain tube	Serum	1 ml	Daily	5 days	Kaunter Utama Jabatan Patologi	

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24	Anti-HBc IgM EIA	Microbiology	Plain tube	Serum	1 ml	Daily	5 days	Kaunter Utama Jabatan Patologi	
25	Anti-HBc Total EIA	Microbiology	Plain tube	Serum	1 ml	Daily	5 days	Kaunter Utama Jabatan Patologi	
26	Anti-HBe EIA	Microbiology	Plain tube	Serum	1 ml	Daily	5 days	Kaunter Utama Jabatan Patologi	
27	Anti Beta-2 Glycoprotein 1 Antibodies IgM & IgG	Microbiology	Plain tube	Blood	5 ml	Tuesday & Thursday	14 days	Kaunter Utama Jabatan Patologi	
28	Anti-Cardiolipin (ACL) IgM & IgG	Microbiology	Plain tube	Blood	5 ml	Tuesday & Thursday	14 days	Kaunter Utama Jabatan Patologi	
29	Anti-Cyclic Citrullinated Peptides IgG (Anti-CCP/ACPA)	Microbiology	Plain tube	Blood	5 ml	Tuesday & Thursday	14 days	Kaunter Utama Jabatan Patologi	
30	Anti-neutrophil Cytoplasmic antibody (ANCA)	Microbiology	Plain tube	Blood	5 ml	Once a week	14 days	Kaunter Utama Jabatan Patologi	Initial screening with ANCA IF test followed by specific ELISA if positive
31	Anti double-stranded DNA	Microbiology	Plain tube	Blood	5 ml	Once a week	14 days	Kaunter Utama Jabatan Patologi	Indicated if SLE clinically suspected. A reflex test for positive ANA with homogenous pattern.
32	Antinuclear antibodies - Extractable Nuclear Antigen (ENA)	Microbiology	Plain Tube	Blood	5 ml	Once a week	14 days	Kaunter Utama Jabatan Patologi	
33	Antinuclear antibodies (screening)	Microbiology	Plain tube	Blood	5 ml	Monday, Wednesday, Friday	7 days	Kaunter Utama Jabatan Patologi	
34	Antinuclear antibodies (IF)	Microbiology	Plain tube	Blood	5 ml	Tuesday	14 days	Kaunter Utama Jabatan Patologi	
35	Anti-streptolysin 'O' Titre (ASOT)	Microbiology	Plain tube	Blood	5 ml	Monday, Wednesday, Friday	4 days	Kaunter Utama Jabatan Patologi	
36	Anti-thyroglobulin	Special Chemical Pathology	Plain tube with gel (yellow cap)	Serum	3 ml	2 times / week	10 working days	Kaunter Utama Jabatan Patologi	
37	Anti-thyroid Specific Peroxidase	Special Chemical Pathology	Plain tube with gel (yellow cap)	Serum	3 ml	2 times / week	10 working days	Kaunter Utama Jabatan Patologi	
38	Anti-thyroid Stimulating Hormone Receptor	Special Chemical Pathology	Plain tube with gel (yellow cap)	Serum	3 ml	2 times / week	10 working days	Kaunter Utama Jabatan Patologi	
39	Aspartate Transaminase (AST)	Core Lab SCACC Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
40	Benzodiazepine	Special Chemical Pathology	Plain tube without gel (red cap)	Serum	3 ml	Weekdays Office hours	1 working day	Kaunter Utama Jabatan Patologi	TDM form
41	Beta Human Chorionic Gonadotrophin (β-hCG)	Core Lab	i) Blood: Plain tube with gel (yellow cap) ii) CSF & Body Fluid : Sterile container	Blood / CSF / Body Fluid	i) Blood: 3 ml ii) CSF & Body Fluid: 1 ml	Monday - Friday Sat, Sun & PH : Urgent request only	1 hour (Urgent) 2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	
42	Bilirubin - Direct	Core Lab SCACC Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
43	Bilirubin - Total	Core Lab SCACC Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
44	Bilirubin, Fluid	Core Lab	Plain container	Body Fluid	2 ml	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	Send to the laboratory as soon as possible.
45	BK virus (BKV) - DNA PCR (Quantitative)	Microbiology	EDTA tube	Plasma	3-5 ml	Once a week	7 days	Kaunter Utama Jabatan Patologi	BK DNA Viral Load acceptance criteria 1.Transport in ice. 2.Request form shall be countersigned and stamped by specialist/consultant. 3.For transplant monitoring either weekly, 2 weekly or 4 weekly as stated in latest Malaysian guideline of transplant. 4.Non compliance may result in test rejection.
46	Blood culture & sensitivity (aerobic)	Microbiology	Aerobic Blood Culture Bottle	Blood	5 -10 ml	Daily	7 days	Kaunter Utama Jabatan Patologi	Preliminary report available
47	Blood culture & sensitivity (anaerobic)	Microbiology	Anaerobic Blood Culture Bottle	Blood	5 -10 ml	Daily	7 days	Kaunter Utama Jabatan Patologi	Preliminary report available
48	Blood Film for Malarial parasites (BFMP)	Microbiology	Thick/Thin film	Thick & Thin blood smear	Not applicable	Daily	2 hours	Microbiology lab	Preliminary report available
49	Blood Fungal culture & sensitivity	Microbiology	Aerobic Blood Culture Bottle or Myco/F Lytic	Blood	5 -10 ml	Daily	30 days	Kaunter Utama Jabatan Patologi	To request blood fungal culture bottle from Microbiology Lab. Lab. Preliminary report available

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50	Blood Gases (ABG / VBG) i) Blood pH ii) CO2 pressure iii) O2 pressure iv) Bicarbonate v) Total CO2 vi) Base Excess	Core Lab SCACC Lab	Dry heparinized syringe	Blood	0.6 ml	Daily	1 hour (Urgent) 2 hours (SCACC-Routine)	Kaunter Utama Jabatan Patologi SCACC Lab	Refer Instruction On Blood Gas Sample Collection 
51	BM Aspirate	Haematology	Smear	Bone Marrow	Not applicable	Daily by appointment	10 days	Haematology Laboratory Counter	Please call ext 6549 for appointment.
52	BM Trephine Biopsy (routine)	Haematology	Sterile/Universal container (with 10% formalin)	Trephine biopsy	Not applicable	Daily by appointment	30 days	Kaunter Utama Jabatan Patologi	Please call ext 6549 for appointment.
53	BM Trephine Biopsy (complex)	Haematology	Sterile/Universal container (with 10% formalin)	Trephine biopsy	Not applicable	Daily by appointment	40 days	Kaunter Utama Jabatan Patologi	Please call ext 6549 for appointment.
54	Bone culture & sensitivity	Microbiology	Sterile container	Bone	Not applicable	Daily	5 days	Kaunter Utama Jabatan Patologi	
55	Ceruloplasmin	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour)	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	
56	Calcium	Core Lab SCACC Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
57	Calcium, Urine	Core Lab SCACC Lab	Sterile urine container / 24 hr Urine container	Random Urine / 24 hr urine	5 ml / 24 hr Urine collection	Daily (Office hour)	1 working day 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	24-Hours Urine collection procedure: i. 24-hour urine container containing preservatives for the required testing are available at the Stor Integrasi counter, Jabatan Patologi. ii. On the day of collection, the first urine voided must be discarded. Time of first urine voided is start of the timing for the 24 hours' urine collection. iii. Collect the second and subsequent voided urine for 24 hours into the 24 hours' Sterile urine container. iv. At the end of 24 hours, the last urine voided is collected. For best result, refrigerate the urine if possible. v. Label the container as directed and send immediately to the laboratory.
58	Cancer Antigen 125 (CA 125)	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour)	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	
59	Cancer Antigen 15-3 (CA 15-3)	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour)	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	
60	Cancer Antigen 19-9 (CA 19-9)	Core Lab	i) Blood: Plain tube with gel (yellow cap) ii) CSF & Body Fluid : Sterile container	Blood / CSF / Body Fluid	i) Blood: 3 ml ii) CSF & Body Fluid: 1 ml	Daily (Office hour)	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	
61	Carbamazepine	Core Lab	Plain tube without gel (red cap)	Blood	4 ml	Weekdays Office hours Weekend : 8:30 am - 12:30 pm	6 hours	Kaunter Utama Jabatan Patologi	TDM form
62	Carcinoembryonic Antigen (CEA)	Core Lab	i) Blood: Plain tube with gel (yellow cap) ii) CSF & Body Fluid : Sterile container	Blood / CSF / Body Fluid	i) Blood: 3 ml ii) CSF & Body Fluid: 1 ml	Daily (Office hour)	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	
63	Cerebrospinal fluid culture & sensitivity	Microbiology	Sterile container	CSF	3 ml	Daily	5 days	Kaunter Utama Jabatan Patologi	Preliminary report available pending validation
64	Chloride	Core Lab SCACC Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
65	Chloride, Fluid	Core Lab	Plain container	Body Fluid	2 ml	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	Send to the laboratory as soon as possible.

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66	Chloride, Urine	Core Lab SCACC Lab	Sterile urine container / 24 hr Urine container	Random Urine / 24 hr urine	5 ml / 24 hr Urine collection	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	24-Hours Urine collection procedure: i. 24-hour urine container containing preservatives for the required testing are available at the Stor Integrasi counter, Jabatan Patologi. ii. On the day of collection, the first urine voided must be discarded. Time of first urine voided is start of the timing for the 24 hours' urine collection. iii. Collect the second and subsequent voided urine for 24 hours into the 24 hours' Sterile urine container. iv. At the end of 24 hours, the last urine voided is collected. For best result, refrigerate the urine if possible. v. Label the container as directed and send immediately to the laboratory.
67	Cholesterol	Core Lab SCACC Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
68	Cholestrol, Fluid	Core Lab	Plain container	Body Fluid	2 ml	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	Send to the laboratory as soon as possible.
69	Cholinesterase	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour)	1 working day 3 working days for external user	Kaunter Utama Jabatan Patologi	
70	CMV - DNA PCR Viral Load (Quantitative)	Microbiology	EDTA tube	Plasma	3-5 ml	Once a week	7 days	Kaunter Utama Jabatan Patologi	CMV DNA Viral Load acceptance criteria 1.Transport in ice. 2.Request form shall be countersigned and stamped by specialist/consultant. 3.Minimum request interval for transplant weekly or 2 weekly or as in latest National Transplant Guideline in Malaysia. Sequential test requested must be more than 3 days apart. 4.Request may be rejected if does not fulfilled the above requirements.
71	CMV - DNA PCR Viral Load (Quantitative)	Microbiology	Sterile container	CSF	1 ml	Once a week	7 days	Kaunter Utama Jabatan Patologi	Transport in ice.
72	CMV - IgG ELISA	Microbiology	Plain tube	Serum	1 ml	Once a week	7 days	Kaunter Utama Jabatan Patologi	
73	CMV - IgM ELISA	Microbiology	Plain tube	Serum	1 ml	Once a week	7 days	Kaunter Utama Jabatan Patologi	
74	Coagulation Test i) Prothrombin Time (PT) ii) INR iii) Activated Partial Thrombin Time (APTT) iv) APTT Ratio	Core Lab	Sodium citrate tube	Blood	To fill up the tube with blood until indicated line.	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	To fill up the tube with blood until indicated line. Send to the laboratory as soon as possible (within 2 hours of sample collection).
75	Complement C3	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour)	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	PER-PAT 301 form
76	Complement C4	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour)	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	PER-PAT 301 form
77	Corneal scrapping	Microbiology	Culture plate	Corneal scrapping	BA,MAC,CHOC,SAB	Daily	14 days	Microbiology lab	To collect culture plates from Microbiology Unit before collection
78	Cortisol, serum	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour)	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	Specimen collection: 1. Morning serum Cortisol: between 6 to 10 am 2. Evening serum Cortisol: between 4 to 8 pm.
79	C-Peptide	Special Chemical Pathology	Plain tube with gel (yellow cap)	Serum	3 ml	2 times / week	5 working days	Kaunter Utama Jabatan Patologi	
80	C-Reactive protein	Core Lab	Plain tube with gel (yellow cap) / Lithium heparin tube	Blood	3 ml	Daily	1 day 3 working days for external user	Kaunter Utama Jabatan Patologi	
81	Creatine kinase	Core Lab SCACC Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
82	Creatinine	Core Lab SCACC Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
83	Creatinine, Fluid	Core Lab	Plain container	Body Fluid	2 ml	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	Send to the laboratory as soon as possible.
84	Creatinine 24hr Peritoneal Dialysate	SCACC Lab	Plain container	Body Fluid	2 ml	Daily (Office hour)	6 hours (Routine)	SCACC Lab	SCACC Lab for routine test only

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85	Creatinine clearance i) Serum/Plasma creatinine ii) Urine creatinine	Core Lab SCACC Lab	24 hr Urine container & Lithium heparin tube	Blood & Urine	4 ml (blood) & 24 hr Urine collection	Daily (Office hour)	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	The test requires a 24-hour urine collection and a blood sample drawn within 24 hour of urine collection.
86	Creatinine Peritoneal Dialysate	SCACC Lab	Plain container	Body Fluid	2 ml	Daily (Office hour)	6 hours (Routine)	SCACC Lab	SCACC Lab for routine test only
87	Creatinine, Urine	Core Lab SCACC Lab	Sterile urine container / 24 hr Urine container	Random Urine / 24 hr urine	5 ml / 24 hr Urine collection	Daily (Office hour)	1 working day 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	24-Hours Urine collection procedure: i. 24-hour urine container containing preservatives for the required testing are available at the Stor Integrasi counter, Jabatan Patologi. ii. On the day of collection, the first urine voided must be discarded. Time of first urine voided is start of the timing for the 24 hours' urine collection. iii. Collect the second and subsequent voided urine for 24 hours into the 24 hours' Sterile urine container. iv. At the end of 24 hours, the last urine voided is collected. For best result, refrigerate the urine if possible. v. Label the container as directed and send immediately to the laboratory.
88	Cryoglobulin test	Haematology	2 EDTA tubes & 2 Plain tubes without gel (red cap)	Blood	12 ml (2.0 ml for each EDTA tube AND 4.0 ml for each plain tube)	By appointment	7 days	Haematology Laboratory Counter	Please call ext 6549 for appoinment. Avoid meal 4 hours before blood taking.
89	Cryptococcal antigen - CSF	Microbiology	Sterile container	CSF	3 ml	Daily	1 day	Microbiology lab	Preliminary report available pending validation
90	Cryptococcal antigen - Serum	Microbiology	Plain tube	Blood	3-5 ml	Daily	1 day	Microbiology lab	Preliminary report available pending validation
91	CSF Biochemistry i) Glucose ii) Total Protein iv) Appearance	Core Lab	Fluoride tube/Sterile Bijou bottle	CSF	1 ml	Daily	1 hour (Urgent)	Kaunter Utama Jabatan Patologi	Send to the laboratory as soon as possible.
92	CT/NG GeneXpert	Microbiology	Sterile container	Urine	2 mL	Monday-Friday	24 hours	Kaunter Utama Jabatan Patologi	PER-PAT 301 form Request accepted from STD Clinic HKL and verified by ID Team only
93	Cyclosporin	Core Lab	EDTA tube	Blood	2 ml	Weekdays Office hours Weekend : 8:30 am - 12:30 pm	6 hours 1 day for external user	Kaunter Utama Jabatan Patologi	TDM form
94	Cytology : Non-gynaecology	Cytology	Universal container / sterile container	Body Fluid, Washing,Urine	Minimum of 20mL to 200mL or as collected depending on storage facility	Daily	Urgent: 3 working days Routine: 14 calendar days	Kaunter Penerimaan Sampel Unit Sitologi	
95	Cytology : Non-gynaecology	Cytology	Universal container / sterile container	Sputum	As collected	Daily	Urgent: 3 working days Routine: 14 calendar days	Kaunter Penerimaan Sampel Unit Sitologi	
96	Cytology: Fine Needle Aspiration	Cytology	Alcohol fixed and air-dried slides	Fine Needle Aspiration	As collected	By appointment: 1. Monday (non-breast cases/endocrine cases)- Appointment given by Cytology Lab 2. Thursday (Breast cases/endocrine cases) - Appointment given by Cytology Lab	Urgent: 3 working days Routine: 14 calendar days	Kaunter Penerimaan Sampel Unit Sitologi	
97	Cytology: Non-gynaecology	Cytology	Sterile bijou bottle / collecting tube	CSF	As collected	Daily	Urgent: 3 working days	Kaunter Penerimaan Sampel Unit Sitologi	
98	Cytology: Non-gynaecology	Cytology	Smear in coplin jar with 96% alcohol or place spray fixed slide in slide mailer/slide tray	Brushing	1-3 smears	Daily	Urgent: 3 working days Routine: 14 calendar days	Kaunter Penerimaan Sampel Unit Sitologi	Slide mailer
99	Cytology: Pap smear conventional	Cytology	Alcohol fixed slide	Smear (on slide)	1 smear	Daily	Urgent: 14 working days Routine: 30 calendar days	Kaunter Utama Jabatan Patologi	Slide mailer

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100	Cytology: Pap smear Liquid based	Cytology	Fluid-based (Thin Prep Kit)	Cervical broom rinsed in fluid based kit fixative	As collected	Daily	Urgent: 14 working days Routine: 30 calendar days	Kaunter Penerimaan Sampel Unit Sitologi	
101	D-Dimer	Core Lab	Sodium citrate tube	Blood	To fill up the tube with blood until indicated line.	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	To fill up the tube with blood until indicated line. Send to the laboratory as soon as possible (within 2 hours of sample collection).
102	Dehydroepiandrosterone Sulfate (DHEA-S)	Special Chemical Pathology	Plain tube with gel (yellow cap)	Serum	3 ml	2 times / week	5 working days	Kaunter Utama Jabatan Patologi	
103	Dengue Serology - IgG ELISA	Microbiology	Plain tube	Serum	1 ml	Daily	2 days	Kaunter Utama Jabatan Patologi	Cut off receive sample 8.00am to proceed test on same day
104	Dengue Serology NS1 Antigen - ELISA	Microbiology	Plain tube	Serum	1 ml	Daily	2 days	Kaunter Utama Jabatan Patologi	Cut off receive sample 8.00am to proceed test on same day
105	Dengue Serology - IgM ELISA	Microbiology	Plain tube	Serum	1 ml	Daily	2 days	Kaunter Utama Jabatan Patologi	Cut off receive sample 8.00am to proceed test on same day
106	Digoxin	Core Lab	Plain tube without gel (red cap)	Blood	4 ml	Weekdays Office hours Weekend : 8:30 am - 12:30 pm	6 hours 1 day for external user	Kaunter Utama Jabatan Patologi	TDM form
107	DIVC Screening : i) Prothrombin Time (PT) ii) INR iii) Activated Partial Thrombin Time (APTT) iv) APTT Ratio v) Fibrinogen vi) D-Dimer viii) Haemoglobin vii) Platelet Count	Core Lab	Sodium citrate tube & EDTA tube	Blood	Citrate tube - To fill up the tube with blood until indicated line & EDTA tube 2 ml	Daily	90 minutes (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	To fill up the tube with blood until indicated line. Send to the laboratory as soon as possible (within 2 hours of sample collection).
108	DNA Analysis Alpha Thalassaemia and DNA Analysis Beta Thalassaemia	Haematology	EDTA tube	Blood	2.0-3.0 ml	Office hour	90 days	Kaunter Utama Jabatan Patologi	Please call ext 5746 or 5748 for information. Must include Hb Analysis report and recent Full Blood Count result. Detail history on Index Case must be provided for family screening.
109	Ear culture & sensitivity	Microbiology	Amies transport media / sterile container	Pus swab / tissue	Not applicable	Daily	5 days	Kaunter Utama Jabatan Patologi	
110	EBV VCA - IgG EIA	Microbiology	Plain tube	Serum	1 ml	Once a week	7 days	Kaunter Utama Jabatan Patologi	
111	EBV VCA - IgM EIA	Microbiology	Plain tube	Serum	1 ml	Once a week	7 days	Kaunter Utama Jabatan Patologi	
112	Efficiency testing on autoclaves	Microbiology	Not applicable	Biological Indicator Catridge	Not applicable	Daily	2 days	Microbiology lab	
113	EBV -DNA PCR Viral load (Quantitative)	Microbiology	EDTA tube	Plasma	3-5 ml	By batch	7 days	Kaunter Utama Jabatan Patologi	EBV DNA PCR Viral Load acceptance criteria 1.Transport in ice. 2.Request form shall be countersigned and stamped by specialist/consultant. 3.Test indication is for acute infection and post transplant infection or complication not for surveillance. 4.Non compliance may result in test rejection.
114	EBV -DNA PCR Viral load (Quantitative)	Microbiology	Sterile container	CSF	1 ml	By batch	7 days	Kaunter Utama Jabatan Patologi	Transport in ice.
115	Erythrocyte Sedimentation Rate (ESR)	Core Lab	EDTA tube	Blood	2 ml	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	To fill up the tube with blood until indicated line. Send to the laboratory as soon as possible (within 2 hours of sample collection).
116	Estradiol (Oestradiol/E2)	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour)	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	Blood taking at Day 2 to Day 5 menses
117	Ethanol	Core Lab	Plain tube without gel (red cap)	Blood	4 ml	Weekdays Office hours Weekend : 8:30 am - 12:30 pm	6 hours 1 day for external user	Kaunter Utama Jabatan Patologi	TDM form
118	Everolimus	Drug & Toxicology Lab (IUN)	EDTA tube	Whole blood	3 ml	Tuesday & Friday	Within 6 hours after sample analysis. (Sample analysis every Tuesday & Friday)	Kaunter Utama Jabatan Patologi	TDM form Sample stability: 3 days (2-8°C) 28 days (-20°C)
119	Eye culture & sensitivity	Microbiology	Amies transport media / sterile container	Swab / tissue	Not applicable	Daily	5 days	Kaunter Utama Jabatan Patologi	
120	Fasting Serum Lipid (FSL) i) Cholesterol ii) HDL Cholesterol iii) LDL Cholesterol iv) Triglycerides	Core Lab SCACC Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	Patient should fast 8-12 hours prior test conducted SCACC Lab for routine test only
121	Ferritin	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour)	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	

LIST OF TEST IN PATHOLOGY DEPARTMENT, HOSPITAL KUALA LUMPUR (HKL)

NO.	TEST	PERFORMING LAB	CONTAINER	SPECIMEN TYPE	VOLUME	SCHEDULE	LTAT (Min/Hr/Day)	LOCATION	REMARK
122	Fertility Test i) Follicle Stimulating Hormone (FSH) ii) Luteinising Hormone (LH) iii) Estradiol (Oestradiol/E2) iv) Progesterone v) Prolactin vi) Testosterone	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour)	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	Specimen collection procedure: 1. Specimen for Progesterone should be collected at day 21 of menstrual cycle. 2. Specimen for Estradiol, FSH and LH should be collected at day 2 to 5 of menstrual cycle.
123	Fibrinogen	Core Lab	Sodium citrate tube	Blood	To fill up the tube with blood until indicated line.	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	To fill up the tube with blood until indicated line. Send to the laboratory as soon as possible (within 2 hours of sample collection).
124	Fluids Biochemistry i) Glucose ii) Total Protein iii) Lactate Dehydrogenase iv) pH	Core Lab	Plain container	Body Fluid	2 ml	Daily	1 hour (Urgent)	Kaunter Utama Jabatan Patologi	Send to the laboratory as soon as possible.
125	Folate	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour)	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	
126	Follicle Stimulating Hormone (FSH)	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour) Sat, Sun & PH : Urgent request only	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	
127	Foreign bodies culture & sensitivity	Microbiology	Sterile container	Indwelling devices / contact lens / corneal button	Not applicable	Daily	5 days	Kaunter Utama Jabatan Patologi	
128	Free Thyroxine (FT4)	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour) Sat, Sun & PH : Urgent request only	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	
129	Free Triiodothyronine (FT3)	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour) Sat, Sun & PH : Urgent request only	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	
130	Full Blood Count (FBC)	Core Lab SCACC Lab	EDTA tube	Whole Blood	2 ml	Daily	45 minutes (Urgent) 3 hours (Routine) 3 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	Send to the laboratory as soon as possible. SCACC Lab for routine test only
131	Full Blood Picture (routine)	Haematology	EDTA tube	Blood	2 ml	Office hour	14 days	Kaunter Utama Jabatan Patologi	Send to the laboratory as soon as possible (within 4 hours of sample collection).
132	Full Blood Picture (priority)	Haematology	EDTA tube	Blood	2 ml	Office hour	7 days	Kaunter Utama Jabatan Patologi	Send to the laboratory as soon as possible (within 4 hours of sample collection).
133	Full Blood Picture (urgent)	Haematology	EDTA tube	Blood	2 ml	Office hour	3 days	Kaunter Utama Jabatan Patologi	Send to the laboratory as soon as possible (within 4 hours of sample collection). Please call ext 6374 or 6549 (normal working hours) or Medical Officer on-call (after office hours) to request for urgent FBP.
134	Full Blood Count (FBC) in citrate	Core Lab SCACC Lab	Sodium citrate tube	Whole Blood	To fill up the tube with blood until indicated line.	Daily	45 minutes (Urgent) 3 hours (Routine) 3 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	To fill up the tube with blood until indicated line. Send to the laboratory as soon as possible (within 2 hours of sample collection).
135	Full Examination Microscopy Examination (FEME)	Microbiology	Sterile container	Sterile body fluid, CSF,PD fluid	3 ml	Daily	1 day	Microbiology lab	
136	Fungal culture	Microbiology	Sterile container	Tissue / Hair / Nail / Skin / Sterile body fluid / Bronchial washing / BAL	Not applicable	Daily	30 days	Kaunter Utama Jabatan Patologi	
137	Gamma-glutamyltransferase (GGT)	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour)	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	
138	Genital culture & sensitivity	Microbiology	Amies transport media	Swab	Not applicable	Daily	5 days	Kaunter Utama Jabatan Patologi	
139	Genexpert SARS-CoV-2 RT-PCR	Microbiology	Swab in Viral Transport Media	Nasopharyngeal swab / NPA	2 ml	Daily	4 hours	Makmal Virologi / Makmal Bakteriologi 1	Triple packaging and transport in ice. Preliminary result available
140	Gentamicin	Core Lab	Plain tube without gel (red cap)	Blood	4 ml	Weekdays Office hours Weekend : 8:30 am - 12:30 pm	6 hours 1 day for external user	Kaunter Utama Jabatan Patologi	TDM form
141	Glucose (FBS, 2HPP, RBS)	Core Lab SCACC Lab	Fluoride tube	Blood	2 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	For Fasting Blood Sugar - Blood sample for this test is taken after an 8-12 hours or overnight fasting. Water intake is allowed during this fasting period SCACC Lab for routine test only
142	Glucose Peritoneal Dialysate	SCACC Lab	Fluoride tube	Body Fluid	2 ml	Daily (Office hour)	6 hours (Routine)	SCACC Lab	SCACC Lab for routine test only
143	Glucose, CSF	Core Lab	Fluoride tube/Sterile Bijou bottle	CSF	1 ml	Daily	1 hour (Urgent)	Kaunter Utama Jabatan Patologi	Send to the laboratory as soon as possible.
144	Glucose, Fluid	Core Lab	Plain container	Body Fluid	2 ml	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	Send to the laboratory as soon as possible.

LIST OF TEST IN PATHOLOGY DEPARTMENT, HOSPITAL KUALA LUMPUR (HKL)

NO.	TEST	PERFORMING LAB	CONTAINER	SPECIMEN TYPE	VOLUME	SCHEDULE	LTAT (Min/Hr/Day)	LOCATION	REMARK
145	Glucose, Urine	Core Lab SCACC Lab	Sterile urine container	Random Urine	5 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
146	Gonococcal culture & sensitivity	Microbiology	Amies transport media / culture plate	Swab / culture plate	Not applicable	Daily	5 days	Kaunter Utama Jabatan Patologi	
147	Growth Hormone	Special Chemical Pathology	Plain tube with gel (yellow cap)	Serum	3 ml	2 times / week	5 working days	Kaunter Utama Jabatan Patologi	
148	H Inclusion	Haematology	EDTA tube	Blood	2 ml	By Appointment	5 days	Kaunter Utama Jabatan Patologi	Send to the laboratory as soon as possible (within 4 hours of sample collection).
149	Haemoglobin A1c (HbA1c)	Special Chemical Pathology	EDTA tube	Whole blood	3 ml	Daily	3 working days	Kaunter Utama Jabatan Patologi	Rejection criteria : Request less than 3 months(12 weeks) from previous result.
150	Haemoglobin Analysis	Haematology	EDTA tube	Blood	2 ml	Office hour	Urgent: 2 weeks Routine: 4 weeks Form 4 screening: 6 weeks	Kaunter Utama Jabatan Patologi	Detail history on Index Case must be provided for family screening.
151	Haptoglobin	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour)	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	
152	Hb F/Hb S quantitation	Haematology	EDTA tube	Blood	2 ml	By Appointment	7 days	Kaunter Utama Jabatan Patologi	Please write appropriate indication on request form.
153	HBe Ag EIA	Microbiology	Plain tube	Serum	1 ml	Daily	5 days	Kaunter Utama Jabatan Patologi	
154	HBsAg - (Screening by EIA)	Microbiology	Plain tube	Serum	1 ml	Daily	5 days	Kaunter Utama Jabatan Patologi	
155	HBsAg - (Confirmatory by EIA)	Microbiology	Plain tube	Serum	1 ml	By batch	5 days	Kaunter Utama Jabatan Patologi	
156	Hepatitis B Virus - DNA PCR Viral Load (Quantitative)	Microbiology	EDTA tube	Plasma	3-5 ml	By batch	14 days	Kaunter Utama Jabatan Patologi	HBV DNA Viral Load acceptance criteria 1.Transport in ice. 2.Request form shall be countersigned and stamped by specialist/consultant. 3.Test indications and request intervals shall follow latest CPG HBV Malaysia. 4.Non compliance may result in test rejection.
157	Hepatitis C Virus (HCV) - RNA PCR Genotyping (Qualitative)	Microbiology	EDTA tube	Plasma	3-5 ml	By batch	30 days	Kaunter Utama Jabatan Patologi	HCV Genotype acceptance criteria 1.Transport in ice. 2.Request form shall be countersigned and stamped by specialist/consultant. 3.Recent report of minimal viral load at least 1000 IU/ml or HCV core antigen within 6 months attached. 4.Patient has evidence of liver cirrhosis (Ultrasound findings, Fibroscan or APRI score). 5.Other relevant indication such as failed current treatment (to attached recent viral load result). 6.Non compliance may result in test rejection.
158	HCV - RNA PCR Viral Load (Quantitative)	Microbiology	EDTA tube	Plasma	3-5 ml	By batch	14 days	Kaunter Utama Jabatan Patologi	HCV RNA VIRAL Load acceptance criteria 1.Transport in ice. 2.Request form shall be countersigned and stamped by specialist/consultant. 3.Test indications and request intervals shall follow latest CPG HCV Malaysia. 4.Non compliance may result in test rejection.
159	HDL Cholesterol	Core Lab SCACC Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
160	Heinz bodies	Haematology	EDTA tube	Blood	2 ml	By appointment	5 days	Kaunter Utama Jabatan Patologi	Please call ext 6549 for appointment.
161	Hepatitis A Virus (HAV) - IgG EIA	Microbiology	Plain tube	Serum	1 ml	Daily	5 days	Kaunter Utama Jabatan Patologi	
162	Hepatitis A Virus (HAV) - IgM EIA	Microbiology	Plain tube	Serum	1 ml	Daily	5 days	Kaunter Utama Jabatan Patologi	
163	Hepatitis C Virus (HCV) - Ab (Screening by EIA)	Microbiology	Plain tube	Serum	1 ml	Daily	5 days	Kaunter Utama Jabatan Patologi	
164	Histopathology: HPE/Surgical Specimen-Urgent Biopsy	Histopathology	Tissue in 10% neutral buffered formalin (NBF)	Tissue	Not applicable	Daily (Office hour)	3 working days (not more than 3 containers, and/or not require further levels or ancillary tests)	Kaunter Unit Histopatologi	Request form : PER-PAT 301
165	Histopathology: HPE/Surgical Specimen-Other than Urgent Biopsy	Histopathology	Tissue in 10% neutral buffered formalin (NBF)	Tissue	Not applicable	Daily (Office hour)	14 days (70% of cases)	Kaunter Unit Histopatologi	Request form : PER-PAT 301
166	Histopathology: HPE/Second Opinion	Histopathology	HPE/Second Opinion	Paraffin block (FFPE) and stained slides	Not applicable	Daily (Office hour)	Within 30 Days	Kaunter Unit Histopatologi	Request form : PER-PAT 301
167	Histopathology : Enzyme Histochemistry for Acetylcholinesterase (Rectal biopsy)	Histopathology	Universal container	Fresh tissue	Not applicable	Daily (Office hour)	14 Days	Kaunter Unit Histopatologi	Request form : PER-PAT 301. Place fresh tissue in an universal container and send immediately to the laboratory

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NO.	TEST	PERFORMING LAB	CONTAINER	SPECIMEN TYPE	VOLUME	SCHEDULE	LTAT (Min/Hr/Day)	LOCATION	REMARK
168	Histopathology : Enzyme Histochemistry (Muscle biopsy /Sural nerve biopsy) <i>*For list of test, refer to eHandbook Pathology (Histopathology Unit)</i>	Histopathology	Universal container	Fresh tissue (biceps/quadriceps muscle or sural nerve)	10 mm diameter & 5 mm depth	Daily (Office hour) / by appointment	Within 30 Days	Kaunter Unit Histopatologi	Request form : PER-PAT 301. Wrap fresh tissue in aluminium foil and place in an universal container. If ETA is > 4 hours, place the specimen container into a larger container containing ice or gel ice
169	Histopathology: Frozen Section	Histopathology	Universal container	Fresh tissue	Not applicable	Daily / by appointment	30 minutes per specimen	Kaunter Unit Histopatologi	Request form : PER-PAT 301. Place fresh tissue in an empty universal container and send immediately to the laboratory. Fill up Frozen section request form (HKL/JP/Hi/AK05-02 form) Appointment is required 1 day earlier (Please call ext 5603/6851)
170	Histopathology: Histochemistry Stain <i>*For list of test, refer to eHandbook Pathology (Histopathology Unit)</i>	Histopathology	Not applicable	Paraffin block (FFPE) or 2 unstained slides per test	Not applicable	Daily (Office hour)	7 Days	Kaunter Unit Histopatologi	Requirement: Request Form for Immunohistochemistry (IHC) and Histochemistry test and according to service agreement
171	Histopathology: Immunofluorescence (IF) Stain <i>*For list of test, refer to eHandbook Pathology (Histopathology Unit)</i>	Histopathology	Universal container	Fresh tissue	Minimum 5mm in length	Daily (Office hour)	14 Days	Kaunter Unit Histopatologi	Fresh tissue soak in Phosphate Buffer Solution (PBS) in universal container. If delayed, place the universal container into larger container containing ice or dry ice
172	Histopathology: Immunohistochemistry (IHC) Stain <i>*For list of test, refer to eHandbook Pathology (Histopathology Unit)</i>	Histopathology	Not applicable	Paraffin block (FFPE) or 2 unstained slides per test	Not applicable	Daily (Office hour)	7 Days	Kaunter Unit Histopatologi	Requirement: Request Form for Immunohistochemistry (IHC) and Histochemistry test and according to service agreement
173	Histopathology: Molecular 1) Chromogenic In Situ Hybridization (CISH)	Histopathology	Not applicable	Paraffin block (FFPE)/ unstained slides	Not applicable	(Office hour) / prior consultation	14 Days	Kaunter Unit Histopatologi	Request form : PER-PAT 301 and special request form for FISH/CISH/PCR For all molecular tests (except DDISH) prior discussion and approval by Molecular Pathologist is required.
174	Histopathology: Molecular 2) Fluorescence In Situ Hybridization (FISH)	Histopathology	Not applicable	Paraffin block (FFPE)/ unstained slides	Not applicable	(Office hour) / prior consultation	Within 30 Days	Kaunter Unit Histopatologi	Request form : PER-PAT 301 and special request form for FISH/CISH/PCR
175	Histopathology: Molecular 3) Polymerase Chain Reaction (PCR)	Histopathology	Not applicable	Paraffin block (FFPE)/ unstained slides	Not applicable	(Office hour) / prior consultation	14 Days	Kaunter Unit Histopatologi	For all molecular tests (except DDISH) prior discussion and approval by Molecular Pathologist is required.
176	Histopathology: Clinical Autopsy	Histopathology	Not applicable	Not applicable	Not applicable	Daily	3 months	Kaunter Unit Histopatologi	Requirement : <i>Borang Keizinan Bedah Siasat Mayat Klinikal (Autopsi Klinikal HKL/JP/Hi-BP-02)</i> -Written consent from the next of kin During office hour, the Histopathology Medical Officer and Pathologist on-call can be contacted at extension 6851 or 5603. After office hour, their contact no. can be obtained at the mortuary counter of IPFN, HKL (ext. 6695) or through hospital operator.
177	HIV-1 RNA PCR Viral Load (Quantitative)	Microbiology	EDTA tube	Plasma	3-5 ml	By batch	14 days	Kaunter Utama Jabatan Patologi	HIV RNA Viral Load acceptance criteria 1.Transport in ice. 2.Request form shall be countersigned and stamped by specialist/consultant. 3.Test indications and request intervals shall follow latest CPG HIV Malaysia. 4.Non compliance may result in test rejection.
178	HSV I & II - DNA PCR (Qualitative)	Microbiology	Sterile container	CSF	1 ml	By batch	7 days	Kaunter Utama Jabatan Patologi	Transport in ice.
179	HSV I & II - DNA PCR (Qualitative)	Microbiology	EDTA tube	Plasma	3-5 ml	By batch	7 days	Kaunter Utama Jabatan Patologi	Transport in ice.
180	HSV I & II - IgG ELISA	Microbiology	Plain tube	Serum	1 ml	Once a week	7 days	Kaunter Utama Jabatan Patologi	
181	HSV I & II - IgM ELISA	Microbiology	Plain tube	Serum	1 ml	Once a week	7 days	Kaunter Utama Jabatan Patologi	
182	HTLV I & II - Ab (Screening by ELISA)	Microbiology	Plain tube	Serum	1 ml	Once a week	7 days	Kaunter Utama Jabatan Patologi	
183	Immunoglobulin A (IgA)	Special Chemical Pathology	Plain tube with gel (yellow cap)	Serum	3 ml	3 times / week	5 working days	Kaunter Utama Jabatan Patologi	
184	Immunoglobulin G (IgG)	Special Chemical Pathology	Plain tube with gel (yellow cap)	Serum	3 ml	3 times / week	5 working days	Kaunter Utama Jabatan Patologi	
185	Immunoglobulin M (IgM)	Special Chemical Pathology	Plain tube with gel (yellow cap)	Serum	3 ml	3 times / week	5 working days	Kaunter Utama Jabatan Patologi	
186	Influenza PCR: Flu A, B & Flu A H1N1 (Qualitative)	Microbiology	Swab in Viral Transport Media	Upper Respiratory tract specimen	2 ml	Once a week	7 days	Kaunter Utama Jabatan Patologi	Flu PCR acceptance criteria 1.Request form shall be countersigned and stamped by specialist/consultant.
187	Influenza PCR: Flu A, B & Flu A H1N1 (Qualitative)	Microbiology	Sterile container	TA / NPA / Sputum	1 ml	Once a week	7 days	Kaunter Utama Jabatan Patologi	2.Clinical indication- moderate to severe pneumonia and patient

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NO.	TEST	PERFORMING LAB	CONTAINER	SPECIMEN TYPE	VOLUME	SCHEDULE	LTAT (Min/Hr/Day)	LOCATION	REMARK
188	Insulin	Special Chemical Pathology	Plain tube with gel (yellow cap)	Serum	3 ml	2 times / week	5 working days	Kaunter Utama Jabatan Patologi	
189	Parathyroid Hormone (PTH 1-84)	Special Chemical Pathology	Plain tube/EDTA (Preference should be given to EDTA plasma, as it is stable longer than serum.	Serum/Plasma	3 ml	2 times / week	5 working days	Kaunter Utama Jabatan Patologi	Preference should be given to EDTA plasma, as it is stable longer than serum.
190	Iron (Fe)	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour)	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	
191	Lactate	Core Lab	Fluoride tube	Blood	2 ml	Daily	1 hour (Urgent)	Kaunter Utama Jabatan Patologi	Sample should be sent immediately in ice bath. Sample need to be processed within 15 minutes of collection sample.
192	Lactate Dehydrogenase (LDH)	Core Lab SCACC Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
193	Lactate Dehydrogenase (LDH), Fluid	Core Lab	Plain container	Body Fluid	2 ml	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	Send to the laboratory as soon as possible.
194	<i>Legionella pneumophila</i> Antigen	Microbiology	Sterile container	Urine	5 ml	Monday, Wednesday, Friday	4 days	Kaunter Utama Jabatan Patologi	
195	<i>Leptospira</i> Antibody IgM	Microbiology	Plain tube	Blood	5 ml	Monday, Wednesday, Friday	4 days	Kaunter Utama Jabatan Patologi	
196	Lithium	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily	1 hour (Urgent) 1 day for external user	Kaunter Utama Jabatan Patologi	TDM form / PER-PAT 301 form (In-house)
197	Liver Function Test (LFT) i) Total Protein ii) Albumin iii) Total Bilirubin iv) Alkaline Phosphatase v) Alanine Transaminase vi) Globulin vii) Albumin / Globulin Ratio	Core Lab SCACC Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
198	Luteinising Hormone (LH)	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour)	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	Blood taking at Day 2 to Day 5 menses
199	Magnesium	Core Lab SCACC Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
200	Magnesium, Urine	Core Lab SCACC Lab	Sterile urine container / 24 hr Urine container	Random Urine / 24 hr urine	5 ml / 24 hr Urine collection	Daily (Office hour)	1 working day 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	24-Hours Urine collection procedure: i. 24-hour urine container containing preservatives for the required testing are available at the Stor Integrasi counter, Jabatan Patologi. ii. On the day of collection, the first urine voided must be discarded. Time of first urine voided is start of the timing for the 24 hours' urine collection. iii. Collect the second and subsequent voided urine for 24 hours into the 24 hours' Sterile urine container. iv. At the end of 24 hours, the last urine voided is collected. For best result, refrigerate the urine if possible. v. Label the container as directed and send immediately to the laboratory.
201	MERS-CoV PCR (Qualitative)	Microbiology	Swab in Viral Transport Media	Upper Respiratory tract specimen	2 ml	Daily	2 days	Kaunter Utama Jabatan Patologi	MERS CoV PCR acceptance criteria 1. Triple packaging and transport in ice. Received cut off at 11 am to proceed test on same day. 2. Request form shall be countersigned and stamped by specialist/consultant. 3. Relevant history, for example history of travelling to Middle East of performing Hajj/Umrah. 4. Sent in triple packaging as in latest guideline. 5. Non compliance may result in test rejection.
202	MERS-CoV PCR (Qualitative)	Microbiology	Sterile container	TA / NPA / Sputum	1 ml	Daily	2 days	Kaunter Utama Jabatan Patologi	
203	Microalbumin, urine	SCACC Lab	Sterile urine container	First morning urine (preferred). Random urine is acceptable if a first-morning urine is not available	5 ml	Daily (Office hour)	6 hours (SCACC-Routine)	SCACC Lab	SCACC Lab for routine test only
204	Microfilaria (Blood film)	Microbiology	Thick film	Blood	Not applicable	Daily	1 day	Kaunter Utama Jabatan Patologi	

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NO.	TEST	PERFORMING LAB	CONTAINER	SPECIMEN TYPE	VOLUME	SCHEDULE	LTAT (Min/Hr/Day)	LOCATION	REMARK
205	Mixing Test	Core Lab	Sodium citrate tube	Blood	2 tubes To fill up the tube with blood until indicated line.	Daily after consultation with Pathologist (Hematology) (Office Hour : 5239/6853 ; After Office Hour : Pathologist Oncall)	1 working day Urgent request upon consultation to Pathologist	Kaunter Utama Jabatan Patologi	To fill up the tube with blood until indicated line. Send to the laboratory as soon as possible (within 2 hours of sample collection).
206	Modified Ziehl-Neelsen for <i>Cryptosporidium/Microsporidium</i>	Microbiology	Sterile container	Stool	5 ml	Daily	2 days	Kaunter Utama Jabatan Patologi	
207	MTB/Rif GeneXpert	Microbiology	Sterile container	Respiratory sample: Sputum, Tracheal aspirate, Bronchial washing, Bronchialveolar lavage (BAL), Nasopharyngeal Aspirate (NPA)	2 mL	Monday-Friday	24 hours	Kaunter Utama Jabatan Patologi	TBIS 20C Form. Request verified by ID Team/ Clinical Microbiologist. Please send MTB C&S together with TB GeneXpert request For non respiratory sample, send to IPR (Referred Test)
208	Mycobacterium culture & sensitivity (Blood)	Microbiology	M-F Lytic Blood Culture Bottle	Blood	5 -10 ml	Daily	42 days	Kaunter Utama Jabatan Patologi	M-F Lytic Blood Culture Bottle- request from Microbiology lab before collection. Indicated for disseminated tuberculous infection
209	Mycophenolic Acid	Drug & Toxicology Lab (IUN)	EDTA tube	Plasma	3 ml	Every Friday	Within 6 hours after sample analysis. (Sample analysis every Friday)	Kaunter Utama Jabatan Patologi	TDM form. For referring labs: centrifuge, aliquote and freeze plasma sample before send to referral lab.
210	Mycoplasma pneumoniae serology	Microbiology	Plain Tube	Blood	5 ml	Monday, Wednesday, Friday	4 days	Kaunter Utama Jabatan Patologi	
211	Nasal swab for MRSA Screening	Microbiology	Amies transport media	Swab	Not applicable	daily	5 days	Kaunter Utama Jabatan Patologi	
212	Occult Blood	Core Lab	Stool container	Stool	1 g	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	
213	Osmolality, Serum	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	
214	Osmolality, Urine	Core Lab	Sterile urine container	Random Urine	2 ml	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	
215	Osmotic Fragility Test (OFT)	Haematology	Lithium heparin tube	Blood (Patient AND Control)	2 tubes (4.0 ml for each tube) for patient AND control	By appointment	5 days	Kaunter Utama Jabatan Patologi	Please call ext 6549 for appointment. Send to the laboratory before 9.00 am. Test must be performed within 2 hours after blood collection if samples are kept at room temperature; or within 6 hours if samples are kept at 2-6°C.
216	Paraquat, Urine	Core Lab	Sterile urine container	Urine	10 ml	Daily	1 hour (Urgent)	Kaunter Utama Jabatan Patologi	Available 24 hrs, PER-PAT 301 form
217	Parvovirus B19 - IgG ELISA	Microbiology	Plain tube	Serum	1 ml	Once a week	7 days	Kaunter Utama Jabatan Patologi	
218	Parvovirus B19 - IgM ELISA	Microbiology	Plain tube	Serum	1 ml	Once a week	7 days	Kaunter Utama Jabatan Patologi	
219	Peritoneal Fluid culture & sensitivity	Microbiology	Sterile container	Peritoneal fluid	5 -10 ml	Daily	5 days	Kaunter Utama Jabatan Patologi	
220	pH, Urine	Core Lab SCACC Lab	Sterile urine container	Random Urine	2 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
221	Phenobarbital	Core Lab	Plain tube without gel (red cap)	Blood	4 ml	Weekdays Office hours Weekend : 8:30 am - 12:30 pm	6 hours 1 day for external user	Kaunter Utama Jabatan Patologi	TDM form
222	Phenytoin	Core Lab	Plain tube without gel (red cap)	Blood	4 ml	Weekdays Office hours Weekend : 8:30 am - 12:30 pm	6 hours 1 day for external user	Kaunter Utama Jabatan Patologi	TDM form
223	Phosphate	Core Lab SCACC Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only

LIST OF TEST IN PATHOLOGY DEPARTMENT, HOSPITAL KUALA LUMPUR (HKL)

NO.	TEST	PERFORMING LAB	CONTAINER	SPECIMEN TYPE	VOLUME	SCHEDULE	LTAT (Min/Hr/Day)	LOCATION	REMARK
224	Phosphate , Urine	Core Lab SCACC Lab	Sterile urine container / 24 hr Urine container	Random Urine / 24 hr urine	5 ml / 24 hr Urine collection	Daily (Office hour)	1 working day 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	24-Hours Urine collection procedure: i. 24-hour urine container containing preservatives for the required testing are available at the Stor Integrasi counter, Jabatan Patologi. ii. On the day of collection, the first urine voided must be discarded. Time of first urine voided is start of the timing for the 24 hours' urine collection. iii. Collect the second and subsequent voided urine for 24 hours into the 24 hours' Sterile urine container. iv. At the end of 24 hours, the last urine voided is collected. For best result, refrigerate the urine if possible. v. Label the container as directed and send immediately to the laboratory.
225	Potassium	Core Lab SCACC Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
226	Potassium, Fluid	Core Lab	Plain container	Body Fluid	2 ml	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	Send to the laboratory as soon as possible.
227	Potassium, Urine	Core Lab SCACC Lab	Sterile urine container / 24 hr Urine container	Random Urine / 24 hr urine	5 ml / 24 hr Urine collection	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	24-Hours Urine collection procedure: i. 24-hour urine container containing preservatives for the required testing are available at the Stor Integrasi counter, Jabatan Patologi. ii. On the day of collection, the first urine voided must be discarded. Time of first urine voided is start of the timing for the 24 hours' urine collection. iii. Collect the second and subsequent voided urine for 24 hours into the 24 hours' Sterile urine container. iv. At the end of 24 hours, the last urine voided is collected. For best result, refrigerate the urine if possible. v. Label the container as directed and send immediately to the laboratory.
228	Progesterone	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour)	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	Blood taking at Day 21 of menses
229	Procalcitonin	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily	1 day	Kaunter Utama Jabatan Patologi	
230	Prolactin	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour)	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	
231	Prostate-Specific Antigen (free)	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour)	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	Free PSA is offered if Total PSA = 4 - 10 ng/mL
232	Prostate-Specific Antigen (total)	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour)	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	
233	Protein Electrophoresis and Immunofixation, Serum	Special Chemical Pathology	Plain tube with gel (yellow cap)	Serum	3 ml	2 times / week	15 working days-(except for sample require further tests eg: extended immunofixation or BME treatment)	Kaunter Utama Jabatan Patologi	Rejection criteria: Request less than 1 month from previous result.
234	Protein Electrophoresis and Immunofixation, Urine	Special Chemical Pathology	Sterile urine container	Random Urine / 24 hr urine	5 ml / 24 hr Urine collection	2 times / week	15 working days-(except for sample require further tests eg: extended immunofixation or BME treatment)	Kaunter Utama Jabatan Patologi	
235	Protein, Total	Core Lab SCACC Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
236	Protein, Fluid	Core Lab	Plain container	Body Fluid	2 ml	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	Send to the laboratory as soon as possible.

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NO.	TEST	PERFORMING LAB	CONTAINER	SPECIMEN TYPE	VOLUME	SCHEDULE	LTAT (Min/Hr/Day)	LOCATION	REMARK
237	Protein, Urine	Core Lab SCACC Lab	Sterile urine container / 24 hr Urine container	Random Urine / 24 hr urine	5 ml / 24 hr Urine collection	Daily (Office hour)	1 working day 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	24-Hours Urine collection procedure: i. 24-hour urine container containing preservatives for the required testing are available at the Stor Integrasi counter, Jabatan Patologi. ii. On the day of collection, the first urine voided must be discarded. Time of first urine voided is start of the timing for the 24 hours' urine collection. iii. Collect the second and subsequent voided urine for 24 hours into the 24 hours' Sterile urine container. iv. At the end of 24 hours, the last urine voided is collected. For best result, refrigerate the urine if possible. v. Label the container as directed and send immediately to the laboratory.
238	Protein Creatinine Ratio, Urine i) Protein, Urine ii) Creatinine, Urine	Core Lab SCACC Lab	Sterile urine container	Random Urine	5 ml	Daily (Office hour)	1 working day 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
239	Protein, CSF	Core Lab	Fluoride tube/Sterile Bijou bottle	CSF	1 ml	Daily	1 hour (Urgent)	Kaunter Utama Jabatan Patologi	Send to the laboratory as soon as possible.
240	Prothrombin Time (PT) & INR	Core Lab	Sodium citrate tube	Blood	To fill up the tube with blood until indicated line.	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	To fill up the tube with blood until indicated line. Send to the laboratory as soon as possible (within 2 hours of sample collection).
241	Pus culture & sensitivity	Microbiology	Amies transport media / sterile container	Swab / pus aspirate	3 ml	Daily	5 days	Kaunter Utama Jabatan Patologi	
242	QIAstat-Dx Respiratory SARS-CoV-2 Panel	Microbiology	Universal Transport Media (UTM)	Nasopharyngeal swab	Not applicable	Monday-Friday (8.00 am- 5.00pm) Saturday, Sunday & PH (8.00am-2.00pm)	1 day	Makmal Virologi / Makmal Bakteriologi 1	Please collect UTM from Virology Lab. Triple packaging and transport in ice. Preliminary result available. Request verified by ID Team/ Clinical Microbiologist
243	QIAstat-Dx Meningitis Panel	Microbiology	Sterile container	CSF	0.5 ml	Monday-Friday (8.00 am- 5.00pm) Saturday, Sunday & PH (8.00am-2.00pm)	1 day	Makmal Virologi / Makmal Bakteriologi 1	By appointment and request verified by Clinical Microbiologist.
244	Rapid Plasma Reagin (<i>Syphilis</i>)	Microbiology	Plain tube	Blood	5 ml	Daily	4 days	Kaunter Utama Jabatan Patologi	Syphilis screening test and treatment monitoring for confirmed cases
245	Rapid Respiratori Antigen - (RTK) Influenza type A, Influenza type B, Respiratory Syncytial Virus (RSV), Adenovirus	Microbiology	FLOQ swab or Sterile container	Nasopharyngeal swab (FLOQ Swab) or Nasopharyngeal aspirate	Not applicable	Monday-Friday (6am- 3pm)	1 day	Kaunter Utama Jabatan Patologi	Transport in ice
246	Rectal Swab for MRO	Microbiology	Amies transport media	Swab	Not Applicable	Screening Staff/Outbreak Cases	5 days	Kaunter Utama Jabatan Patologi	
247	Renal Profile i) Urea ii) Creatinine iii) Chloride iv) Potassium v) Sodium vi) eGFR	Core Lab SCACC Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
248	Respiratory culture & sensitivity	Microbiology	Sterile container	Tracheal aspirate, Sputum, Bronchial washing (BW), Bronchoalveolar lavage (BAL)	Not applicable	Daily	5 days	Kaunter Utama Jabatan Patologi	
249	Reticulocyte count	Core Lab	EDTA tube	Blood	2 ml	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	Send to the laboratory as soon as possible.
250	Rheumatoid Factor	Special Chemical Pathology	Plain tube with gel (yellow cap)	Serum	3 ml	3 times / week	5 working days	Kaunter Utama Jabatan Patologi	
251	Rubella - IgG ELISA	Microbiology	Plain tube	Serum	1 ml	Once a week	7 days	Kaunter Utama Jabatan Patologi	
252	Rubella - IgM ELISA	Microbiology	Plain tube	Serum	1 ml	Once a week	7 days	Kaunter Utama Jabatan Patologi	
253	Salicylate	Core Lab	Plain tube without gel (red cap)	Blood	4 ml	Daily	1 hour (Urgent) 1 day for external user	Kaunter Utama Jabatan Patologi	PER-PAT 301 form/ TDM form (In-house)
254	SARS-CoV-2 Antigen RTK	Microbiology	Dacron swab	Nasopharyngeal swab	-	Monday-Friday (8.00 am- 4.00pm) Saturday, Sunday & PH (8.00am-2.00pm)	4 hours	Makmal Virologi / Makmal Bakteriologi 1	Triple packaging and transport in ice.
255	SARS-CoV-2 RT-PCR (Qualitative)	Microbiology	Sterile container	TA / NPA / Sputum	1 ml	Daily Receive cut-off at 11am	2 days	Kaunter Utama Jabatan Patologi	Triple packaging and transport in ice.

LIST OF TEST IN PATHOLOGY DEPARTMENT, HOSPITAL KUALA LUMPUR (HKL)

NO.	TEST	PERFORMING LAB	CONTAINER	SPECIMEN TYPE	VOLUME	SCHEDULE	LTAT (Min/Hr/Day)	LOCATION	REMARK
256	SARS-CoV-2 RT-PCR	Microbiology	Swab in Viral Transport Media	Upper / Lower respiratory sample	2 ml	Monday-Friday (8.00 am-5.00pm) Saturday, Sunday & PH (8.00am-2.00pm)	24- 48 hours	Makmal Virologi / Makmal Bakteriologi 1	SARS CoV PCR acceptance criteria 1. Triple packaging and transport in ice. 2. Request form shall be countersigned and stamped by specialist/consultant. 3. Sent in triple packaging as in latest guideline. 4. Non compliance may result in test rejection.
257	Serum-Ascitic Albumin Gradient (SAAG) i) Serum/Plasma Creatinine ii) Fluid Creatinine	Core Lab	Plain tube with gel (yellow cap) / Lithium heparin tube	Serum & Fluid	3 ml Blood & 1 ml fluid	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	Send both serum and fluid specimen that are taken on the same day for the SAAG determination.
258	Serum Bilirubin (SB) i) Total Bilirubin ii) Direct Bilirubin iii) Indirect Bilirubin	Core Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	SCACC Lab for routine test only
259	Sickling test	Haematology	EDTA tube	Blood	2 ml	By appointment	5 days	Kaunter Utama Jabatan Patologi	Please call ext 6549 for appointment.
260	Sodium	Core Lab SCACC Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
261	Sodium, Fluid	Core Lab	Plain container	Body Fluid	2 ml	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	Send to the laboratory as soon as possible.
262	Sodium, Urine	Core Lab SCACC Lab	Sterile urine container / 24 hr Urine container	Random Urine / 24 hr urine	5 ml / 24 hr Urine collection	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	24-Hours Urine collection procedure: i. 24-hour urine container containing preservatives for the required testing are available at the Stor Integrasi counter, Jabatan Patologi. ii. On the day of collection, the first urine voided must be discarded. Time of first urine voided is start of the timing for the 24 hours' urine collection. iii. Collect the second and subsequent voided urine for 24 hours into the 24 hours' Sterile urine container. iv. At the end of 24 hours, the last urine voided is collected. For best result, refrigerate the urine if possible. v. Label the container as directed and send immediately to the laboratory.
263	Sterile body fluid culture and sensitivity	Microbiology	Sterile container	Aspirated fluid	5 ml	Daily	5 days	Kaunter Utama Jabatan Patologi	(excluding CSF, urine and blood) . Preliminary report available pending validation
264	Sterility testing	Microbiology	Sterile container	Milk, TPN fluid, Disinfectant	5 ml	Daily	9 days	Kaunter Utama Jabatan Patologi	
265	Stool culture & sensitivity	Microbiology	Sterile container	Stool	3 ml	Daily	5 days	Kaunter Utama Jabatan Patologi	
266	Stool for <i>Clostridium difficile</i> culture	Microbiology	Sterile container	Stool	3 ml	Daily	5 days	Kaunter Utama Jabatan Patologi	
267	Stool for <i>Clostridium difficile</i> toxin	Microbiology	Sterile container	Stool	3 ml	Daily	2 days	Kaunter Utama Jabatan Patologi	
268	Stool for Isospora	Microbiology	Sterile container	Stool	Not applicable	Daily	2 days	Kaunter Utama Jabatan Patologi	
269	Stool ova and cyst	Microbiology	Sterile container	Stool	3 ml	Daily	2 days	Kaunter Utama Jabatan Patologi	
270	Stool <i>Vibrio cholera</i>	Microbiology	Alkaline Peptone Water	Stool	Not applicable	Daily	5 days	Kaunter Utama Jabatan Patologi	
271	Tacrolimus	Core Lab	EDTA tube	Blood	2 ml	Weekdays Office hours Weekend : 8:30 am - 12:30 pm	6 hours 1 day for external user	Kaunter Utama Jabatan Patologi	TDM form
272	Testosterone	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour)	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	
273	Theophylline	Core Lab	Plain tube without gel (red cap)	Blood	4 ml	Weekdays Office hours Weekend : 8:30 am - 12:30 pm	6 hours 1 day for external user	Kaunter Utama Jabatan Patologi	TDM form
274	Throat swab culture & sensitivity	Microbiology	Amies transport media	Swab	Not applicable	Daily	5 days	Kaunter Utama Jabatan Patologi	
275	Thyroid Stimulating Hormone (TSH)	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour) Sat, Sun & PH : Urgent request only	2 working day 3 working days for external user	Kaunter Utama Jabatan Patologi	
276	Thyroid Function Test i) Thyroid Stimulating Hormone (TSH) ii) Free Thyroxine (FT4)	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour) Sat, Sun & PH : Urgent request only	2 working day 3 working days for external user	Kaunter Utama Jabatan Patologi	

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NO.	TEST	PERFORMING LAB	CONTAINER	SPECIMEN TYPE	VOLUME	SCHEDULE	LTAT (Min/Hr/Day)	LOCATION	REMARK
277	Thyroglobulin	Special Chemical Pathology	Plain tube with gel (yellow cap)	Serum	3 ml	2 times / week	10 working days	Kaunter Utama Jabatan Patologi	
278	Tissue culture & sensitivity	Microbiology	Sterile container	Tissue, biopsy	Not applicable	Daily	5 days	Kaunter Utama Jabatan Patologi	
279	Helicobacter pylori culture & sensitivity	Microbiology	Sterile container	Tissue	Not applicable	Daily	7 days	Kaunter Utama Jabatan Patologi	Gastric biopsy to send immediately to Microbiology Lab
280	Toxoplasma - IgG ELISA	Microbiology	Plain tube	Serum	1 ml	Once a week	7 days	Kaunter Utama Jabatan Patologi	
281	Toxoplasma - IgM ELISA	Microbiology	Plain tube	Serum	1 ml	Once a week	7 days	Kaunter Utama Jabatan Patologi	
282	Transferrin	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour)	2 working days 3 working days for external user	Kaunter Utama Jabatan Patologi	
283	<i>Treponema Pallidum</i> Particle Agglutination (TPPA)	Microbiology	Plain tube	Blood	5 ml	Daily	4 days	Kaunter Utama Jabatan Patologi	Syphilis confirmatory test
284	Triglycerides	Core Lab SCACC Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
285	Triglyceride, Fluid	Core Lab	Plain container	Body Fluid	2 ml	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	Send to the laboratory as soon as possible.
286	Troponin T high sensitive	Core Lab	Lithium heparin tube / Plain tube	Blood	3 ml	Daily	1 hour (Urgent)	Kaunter Utama Jabatan Patologi	Send to the laboratory as soon as possible.
287	Unsaturated Iron Binding Capacity (UIBC)	Core Lab	Plain tube with gel (yellow cap) / Lithium heparin tube	Blood	3 ml	Daily (Office hour)	2 working day 3 working days for external user	Kaunter Utama Jabatan Patologi	
288	Urea	Core Lab SCACC Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
289	Urea, Urine	Core Lab SCACC Lab	Sterile urine container / 24 hr Urine container	Random Urine / 24 hr urine	5 ml / 24 hr Urine collection	Daily (Office hour)	1 working day 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	24-Hours Urine collection procedure: i. 24-hour urine container containing preservatives for the required testing are available at the Stor Integrasi counter, Jabatan Patologi. ii. On the day of collection, the first urine voided must be discarded. Time of first urine voided is start of the timing for the 24 hours' urine collection. iii. Collect the second and subsequent voided urine for 24 hours into the 24 hours' Sterile urine container. iv. At the end of 24 hours, the last urine voided is collected. For best result, refrigerate the urine if possible. v. Label the container as directed and send immediately to the laboratory.
290	Urea 24hr Peritoneal Dialysate	SCACC Lab	Plain container	Body Fluid	2 ml	Daily (Office hour)	6 hours (Routine)	SCACC Lab	SCACC Lab for routine test only
291	Urea Peritoneal Dialysate	SCACC Lab	Plain container	Body Fluid	2 ml	Daily (Office hour)	6 hours (Routine)	SCACC Lab	SCACC Lab for routine test only
292	Uric Acid	Core Lab SCACC Lab	Lithium heparin tube	Blood	4 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
293	Uric Acid, Fluid	Core Lab	Plain container	Body Fluid	2 ml	Daily	1 hour (Urgent) 3 hours (Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi	Send to the laboratory as soon as possible.
294	Uric Acid, Urine	Core Lab SCACC Lab	Sterile urine container / 24 hr Urine container	Random Urine / 24 hr urine	5 ml / 24 hr Urine collection	Daily (Office hour)	1 working day 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	24-Hours Urine collection procedure: i. 24-hour urine container containing preservatives for the required testing are available at the Stor Integrasi counter, Jabatan Patologi. ii. On the day of collection, the first urine voided must be discarded. Time of first urine voided is start of the timing for the 24 hours' urine collection. iii. Collect the second and subsequent voided urine for 24 hours into the 24 hours' Sterile urine container. iv. At the end of 24 hours, the last urine voided is collected. For best result, refrigerate the urine if possible. v. Label the container as directed and send immediately to the laboratory.
295	Urine Biochemistry & Microscopic examination	Core Lab	Sterile urine container	Urine	4 ml	Daily	1 hour (Urgent) 3 hours (Routine)	Kaunter Utama Jabatan Patologi	

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NO.	TEST	PERFORMING LAB	CONTAINER	SPECIMEN TYPE	VOLUME	SCHEDULE	LTAT (Min/Hr/Day)	LOCATION	REMARK
296	Urine culture and sensitivity	Microbiology	Sterile urine container	Urine	5 ml	Daily	5 days	Kaunter Utama Jabatan Patologi	Send immediately to Microbiology Lab
297	Urine Hemosiderin	Haematology	Universal container	Urine	5 ml	By appointment	5 days	Kaunter Utama Jabatan Patologi	Send sample immediately after collection.
298	Urine Pregnancy Test	Core Lab SCACC Lab	Sterile urine container	Fresh morning urine (preferred)	2 ml	Daily	1 hour (Urgent) 3 hours (Routine) 6 hours (SCACC-Routine) 3 working days for external user	Kaunter Utama Jabatan Patologi SCACC Lab	SCACC Lab for routine test only
299	Valproic acid	Core Lab	Plain tube without gel (red cap)	Blood	4 ml	Weekdays Office hours Weekend : 8:30 am - 12:30 pm	6 hours 1 day for external user	Kaunter Utama Jabatan Patologi	TDM form
300	Vancomycin	Core Lab	Plain tube without gel (red cap)	Blood	4 ml	Weekdays Office hours Weekend : 8:30 am - 12:30 pm	6 hours 1 day for external user	Kaunter Utama Jabatan Patologi	TDM form
301	Varicella Zoster Virus (VZV) - IgG ELISA	Microbiology	Plain tube	Serum	1 ml	Once a week	7 days	Kaunter Utama Jabatan Patologi	
302	Varicella Zoster Virus (VZV) - IgM ELISA	Microbiology	Plain tube	Serum	1 ml	Once a week	7 days	Kaunter Utama Jabatan Patologi	
303	Varicella Zoster Virus (VZV) DNA PCR (Qualitative)	Microbiology	Sterile container	CSF	1 ml	By batch	7 days	Kaunter Utama Jabatan Patologi	
304	Varicella Zoster Virus (VZV) DNA PCR (Qualitative)	Microbiology	EDTA tube	Plasma	2 ml	By batch	7 days	Kaunter Utama Jabatan Patologi	
305	Veneral Disease Research Lab cerebrospinal fluid (VDRL)	Microbiology	Sterile container	CSF	3 ml	Monday, Wednesday, Friday	4 days	Kaunter Utama Jabatan Patologi	
306	Vitamin B12	Core Lab	Plain tube with gel (yellow cap)	Blood	3 ml	Daily (Office hour)	2 working day 3 working days for external user	Kaunter Utama Jabatan Patologi	
307	25-hydroxyvitamin D	Special Chemical Pathology	Plain tube with gel (yellow cap)	Serum	3 ml	Once a week	10 working days	Kaunter Utama Jabatan Patologi	
308	24 hr Urine Metanephrines: Normetanephrine / Metanephrine / 3-Methoxytyramine	Special Chemical Pathology	24 hr Urine container with 10 mL of 32% HCL	Urine	24 hr Urine collection	Once a week	15 working days	Kaunter Utama Jabatan Patologi	Rejection criteria : i) Inadequate urine collection (Adult < 1 Litre) ii) Urine pH < 2 iii) Must be requested by endocrinologist

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NO.	TEST	PERFORMING LAB	CONTAINER	SPECIMEN TYPE	VOLUME	SCHEDULE	LTAT (Min/Hr/Day)	LOCATION	REMARK
	Amphetamine Type Stimulants								
309	Amphetamine	Drug & Toxicology Lab	Sterile urine container	Urine	30 ml	Daily (Screening) Three times a week (Confirmation)	Medical Check-up (5 days) Medicolegal cases (60 days) Urgent Medicolegal Cases (14 days) Clinical Cases (6 weeks)	Drug & Toxicology Lab (Medicolegal cases) Kaunter Utama Jabatan Patologi (Clinical cases)	UPD-1 (Pindaan 2020) form (Medico-legal cases & Medical checkup) PER-PAT 301 form (Clinical) Medical checkup is ONLY offered to HKL staff via OSH Clinic
310	Methamphetamine								
311	Methylenedioxyamphetamine (MDA)								
312	3,4 Methylenedioxy methamphetamine (MDMA)								
313	Ephedrine								
314	Phentermine								
315	3,4 Methylenedioxyethyl amphetamine (MDEA)**								
	Benzodiazepines								
316	Alprazolam*	Drug & Toxicology Lab	Sterile urine container	Urine	30 ml	Twice a week	Medicolegal cases (60 days) Urgent Medicolegal Cases (14 days) Clinical Cases (6 weeks)	Drug & Toxicology Lab (Medicolegal cases) Kaunter Utama Jabatan Patologi (Clinical cases)	UPD-1 (Pindaan 2020) form (Medico-legal cases) PER-PAT 301 form (Clinical)
317	Alpha-Hydroxalprazolam								
318	Alpha-Hydroxytriazolam								
319	7- Aminoclonazepam								
320	7- Aminoflunitrazepam								
321	7- Aminonitrazepam								
322	7- Aminonimetazepam								
323	Clonazepam								
324	Diazepam*								
325	Flurazepam								
326	Flunitrazepam								
327	Midazolam*								
328	Lorazepam*								
329	Nitrazepam*								
330	Nimetazepam*								
331	Nordiazepam*								
332	Oxazepam*								
333	Temazepam*								
	Cannabinoids (THC)								
334	Delta-9-THC-COOH	Drug & Toxicology Lab	Sterile urine container	Urine	30 ml	Daily (Screening) Three times a week (Confirmation)	Medical Check-up (5 days) Medicolegal cases (10 days) Clinical Cases (6 weeks)	Drug & Toxicology Lab (Medicolegal cases) Kaunter Utama Jabatan Patologi (Clinical cases)	UPD-1 (Pindaan 2020) form (Medico-legal cases & Medical checkup) PER-PAT 301 form (Clinical) Medical checkup is ONLY offered to HKL staff via OSH Clinic
	Ketamine								
335	Dehydronorketamine	Drug & Toxicology Lab	Sterile urine container	Urine	30 ml	Daily (Screening) Twice a week (confirmation)	Medicolegal cases (60 days) Urgent Medicolegal Cases (14 days) Clinical Cases (6 weeks)	Drug & Toxicology Lab (Medicolegal cases) Kaunter Utama Jabatan Patologi (Clinical cases)	UPD-1 (Pindaan 2020) form (Medico-legal cases) PER-PAT 301 form (Clinical)
336	Ketamine								
337	Norketamine								
	Cathinones (Khat)								

LIST OF TEST IN PATHOLOGY DEPARTMENT, HOSPITAL KUALA LUMPUR (HKL)

NO.	TEST	PERFORMING LAB	CONTAINER	SPECIMEN TYPE	VOLUME	SCHEDULE	LTAT (Min/Hr/Day)	LOCATION	REMARK
338	Cathinones (Khat)	Drug & Toxicology Lab	Sterile urine container	Urine	30 ml	Twice a week	Medicolegal cases (60 days) Clinical Cases (6 weeks)	Drug & Toxicology Lab (Medicolegal cases) Kaunter Utama Jabatan Patologi (Clinical cases)	UPD-1 (Pindaan 2020) form (Medico-legal cases) PER-PAT 301 form (Clinical)
Opioids									
339	Morphine	Drug & Toxicology Lab	Sterile urine container	Urine	30 ml	Daily (Screening) Three times a week (Confirmation)	Medical Check-up (5 days) Medicolegal cases (10 days) Clinical Cases (6 weeks)	Drug & Toxicology Lab (Medicolegal cases)	UPD-1 (Pindaan 2020) form (Medico-legal cases & Medical checkup) PER-PAT 301 form (Clinical) Medical checkup is ONLY offered to HKL staff via OSH Clinic
340	Codeine							Kaunter Utama Jabatan Patologi (Clinical cases)	
341	Methadone	Drug & Toxicology Lab	Sterile urine container	Urine	30 ml	Twice a week	Medicolegal cases (60 days) Clinical Cases (6 weeks)	Drug & Toxicology Lab (Medicolegal cases) Kaunter Utama Jabatan Patologi (Clinical cases)	UPD-1 (Pindaan 2020) form (Medico-legal cases) PER-PAT 301 form (Clinical)
342	EDDP								
343	6-Acetylmorphine (6-AM)								
344	Buprenorphine								
345	Dextromethorphan								
346	Fentanyl								
347	Hydrocodone								
348	Hydromorphone								
349	Oxycodone								
350	Oxymorphone								
351	Tramadol								
Synthetic Cathinones									
352	Mephedrone	Drug & Toxicology Lab	Sterile urine container	Urine	30 ml	Twice a week	Medicolegal cases (60 days) Clinical Cases (6 weeks)	Drug & Toxicology Lab (Medicolegal cases) Kaunter Utama Jabatan Patologi (Clinical cases)	UPD-1 (Pindaan 2020) form (Medico-legal cases) PER-PAT 301 form (Clinical)
Mitragynine (Ketum)									
353	Mitragynine	Drug & Toxicology Lab	Sterile urine container	Urine	30 ml	Twice a week	Medicolegal cases (60 days) Clinical Cases (6 weeks)	Drug & Toxicology Lab (Medicolegal cases)	UPD-1 (Pindaan 2020) form (Medico-legal cases) PER-PAT 301 form (Clinical)
354	7-Hydroxymitragynine							Kaunter Utama Jabatan Patologi (Clinical cases)	