



FINAL EXAMINATION FOR THE FELLOWSHIP IN CLINICAL ONCOLOGY

Candidate Reference Sheet

This reference sheet is for candidate use during the single best answer (SBA) question papers. It provides information about normal ranges for investigations, frequently used abbreviations and standard chemotherapy regimes.

NORMAL RANGES

Haematology

Full blood count

Haemoglobin (Hb)	130–180 g/L (males)	115–165 g/L (females)
MCV		80–96 fL
MCH		28–32 pg
MCHC		32–35 g/dL
White cell count (wcc)		$4–11 \times 10^9/L$
Neutrophils (neut)		$1.5–7 \times 10^9/L$
Lymphocytes		$1.5–4 \times 10^9/L$
Monocytes		$< 0.8 \times 10^9/L$
Platelet count (plt)		$150–400 \times 10^9/L$

Erythrocyte sedimentation rate (ESR)

0–20 mm/first hour

D-Dimer screen

< 0.5 mg/L

Activated partial thromboplastin time (APTT)

30–50 seconds

Prothrombin time (PT)

12–13 seconds

Biochemistry

Sodium (Na)	137–144 mmol/L
Potassium (K)	3.5–4.9 mmol/L
Urea (U)	2.5–7.5 mmol/L
Creatinine (Cr)	60–110 μ mol/L
Bicarbonate	20–28 mmol/L
Plasma lactate	0.6–1.8 mmol/L
Amylase	60–80 U/L
Corrected calcium (Ca)	2.2–2.6 mmol/L
Cortisol	100–400 nmol/L
Phosphate (PO ₄)	0.8–1.4 mmol/L
Protein – Total	61–76 g/L
Albumin (alb)	37–49 g/L
Total bilirubin (bil)	1–22 μ mol/L
Alanine aminotransferase (ALT)	5–35 U/L
Aspartate aminotransferase (AST)	1–31 U/L
Alkaline phosphatase (ALP)	45–105 U/L

Gamma-glutamyl transferase (γ GT)	4–35 U/L
Lactate dehydrogenase (LDH)	10–250 U/L
Magnesium (Mg)	0.75–1.05 mmol/L
Fasting glucose ()	3.0–6.0 mmol/L
Random glucose	4.0–11.0 mmol/L
Ferritin	15–300 μ g/L

Tumour Markers

Alphafetoprotein (AFP)	< 10 kU/L
CA 125	< 35 U/mL
CA 15–3	< 35 U/mL
CA 19–9	< 33 U/mL
Carcinoembryonic antigen (CEA)	< 10 μ g/L
Human chorionic gonadotrophin (β HCG)	< 5 U/L
Prostate specific antigen (PSA)	< 4 μ g/L

Endocrinology

Calcitonin	< 27 pmol/L
Growth hormone	
Basal, fasting and between pulses	< 1 mU/L
After hypoglycaemia	> 40 mU/L
Parathyroid hormone (PTH)	0.9–5.4 pmol/L
Prolactin	< 360 mU/L
Thyroglobulin (Tg)	< 3 μ g/L
Thyroid stimulating hormone (TSH)	0.4–5.0 mU/L
Thyroxine (T4)	58–174 nmol/L
Free T3	5–10 pmol/L
Free T4	10–22 pmol/L
Follicle stimulating hormone (FSH)	
	1.0–8.0 IU/L (males)
	1.0–11.0 IU/L (females)

Miscellaneous

Immunoglobins	
IgG	6.0–13.0 g/L
IgA	0.8–3.0 g/L
IgM	0.4–2.5 g/L
IgE	<120 kU/L
β 2–micro globulin	<3 mg/L
C-reactive protein	<10 mg/L
Glomerular filtration rate (EGFR)	70–140 mL/min
Plasma osmolality	278–305 mosmol/kg
Urine osmolality	350–1000 mosmol/kg
Urine specific gravity	1.002–1.028
Urine sodium	40–220 mEq/L
Cerebrospinal fluid (CSF)	
Opening pressure	50–180 mm H ₂ O
Total protein	0.15–0.45 g/L
Albumin	0.066–0.442 g/L
Glucose	3.3–4.4 mmol/L
Cell count	\leq 5/mL
Lymphocytes	60–70%
Monocytes	30–50%
Neutrophils	none

ABBREVIATIONS

4DCT	four-dimensional computed tomography
5-FU/5FU	5-fluorouracil
5-HIAA	5-hydroxyindoleacetic acid
5-HT3	5-hydroxytryptamine
^{99m} Tc	technetium-99m
¹³¹ I	iodine-131
ACE	angiotensin converting enzyme
ACTH	adrenocorticotrophic hormone
ADH	antidiuretic hormone
ADT	androgen deprivation therapy
AFP	alphafetoprotein
AIDS	acquired immune deficiency syndrome
AIN3	anal intra-epithelial neoplasia
ALK	anaplastic lymphoma kinase
ALL	acute lymphoblastic leukaemia
AP	anteroposterior
APC	adenomatous polyposis coli
AUC	area under the curve
BCG	Bacillus Calmette-Guèrin
BCON	bladder carbogen and nicotinamide radiotherapy
bd	twice daily
BED	biologically effective dose
BP	blood pressure
bpm	beats per minute
BRAF	proto-oncogene B-raf
BRCA	breast cancer gene
BSO	bilateral salpingo-oophorectomy
CA 125	cancer antigen 125
CBCT	cone beam computed tomography
CCNU	lomustine
CD20	cluster of differentiation marker 20
CD117	cluster of differentiation 117
CDX2	caudal-related homeobox 2
CEA	carcinoembryonic antigen
CHART	continuous hyperfractionated accelerated radiotherapy
CIN	cervical intraepithelial neoplasia
CIS	carcinoma in situ
CK20	cytokeratins-20
CK7	cytokeratins-7
CLL	chronic lymphocytic leukaemia
CNS	central nervous system
COPD	chronic obstructive pulmonary disease
CPR	cardiopulmonary resuscitation
CRM	circumferential resection margin
CRP	C-reactive protein
CT	computed tomography
CTCAE	common terminology criteria for adverse events
CT TAP	computed tomography thorax, abdomen and pelvis
CTPA	computed tomography pulmonary angiogram
CTV	clinical target volume
CVA	cerebrovascular accident
DCIS	ductal carcinoma in situ

DEXA	dual energy X-ray absorptiometry
DIBH	deep inspiration breath hold
DLCO	diffusing capacity of lung for carbon monoxide
DMSA	dimercaptosuccinic acid
DMSO	dimethyl sulfoxide
DNACPR	do not attempt cardiopulmonary resuscitation
DOG1	discovered on GIST 1
DPYD	dihydropyrimidine dehydrogenase
DTIC	dimethyl triazeno imidazole carboxamide
DTPA	diethylenetriaminepentaacetic acid
DVLA	Driver and Vehicle Licensing Agency
DVT	deep vein thrombosis
EBRT	external beam radiotherapy
EBUS	endobronchial ultrasound
EBV	Epstein-Barr virus
ECG	electrocardiogram
ECOG	Eastern Co-operative Oncology Group
EDTA	⁵¹ Cr-ethylenediamine tetra-acetic acid
EEG	electroencephalogram
EGFR	epidermal growth factor receptor
EGFR-TK	epidermal growth factor receptor tyrosine kinase
EMG	electromyography
EML4	echinoderm microtubule-associated protein-like 4
EMVI	extramural vascular invasion
ENT	ear, nose and throat
EQD2	equivalent dose in 2 Gy fraction
ER	oestrogen receptor
ERCP	endoscopic retrograde cholangiopancreatography
ESR	erythrocyte sedimentation rate
EUA	examination under anaesthesia
EUS	endoscopic ultrasound
EWSR1	Ewing sarcoma breakpoint region 1
FBC	full blood count
FDG	fluoro-2-deoxy-D-glucose
FEV1	forced expired volume in one second
FIGO	International Federation of Gynecology and Obstetrics
FISH	fluorescence in situ hybridisation
FNA	fine needle aspiration
FNAC	fine needle aspiration cytology
FGFR2	fibroblast growth factor receptor 2
FSD	focus skin distance
FT4	free thyroxine level 4
FVC	forced vital capacity
GCS	Glasgow coma scale
GCSF	granulocyte colony stimulating factor
GH	growth hormone
GIT	gastrointestinal tract
GIST	gastrointestinal stromal tumour
GP	general practitioner
GTN	glyceryl trinitrate
GTV	gross tumour volume
HAART	highly active antiretroviral therapy
HCG	human chorionic gonadotrophin
HDR	high dose-rate

H&E	haematoxylin and eosin
HER2	human epidermal growth factor receptor
HHV	human herpesvirus 8
HIFU	high intensity focussed ultrasound
HIV	human immunodeficiency virus
HMB-45	human melanoma black-45
HPV	human papillomavirus
HRD	homologous recombination deficiency
ICU	intensive care unit
ICRP	International Commission on Radiological Protection
ICRU	International Commission on Radiation Units and Measurements
IDH1	isocitrate dehydrogenase 1
IFRT	involved-field radiation therapy
IHC	ImmunoHistoChemistry
IHD	ischaemic heart disease
IM	internal margin
IMC	internal mammary chain
IMRT	intensity modulated radiotherapy
INRT	involved-node radiotherapy
INR	international normalised ratio
IPSS	International Prostate Symptom Score
IR(ME)R	<i>The Ionising Radiation (Medical Exposure) Regulations 2000</i>
ISRT	involved site radiotherapy
ISS	International Staging System
ITV	internal target volume
IV	intravenous
KCO	carbon monoxide transfer coefficient
KRAS	K rat sarcoma
kV	kilovoltage
LCA	leucocyte common antigen
LDH	lactate dehydrogenase
LDR	low dose rate
LCIS	lobular carcinoma in situ
LFTs	liver function tests
LH	luteinising hormone
LHRH	luteinising hormone-releasing hormone
LLETZ	loop excision of the transformation zone
LMWH	low-molecular-weight heparin
LVEF	left ventricular ejection fraction
LVSI	lymphovascular space invasion
MALT	mucosa associated lymphoid tissue
MDRD	modification of diet in renal disease
MDT	multidisciplinary team
MEN1/2A/2B	multiple endocrine neoplasia type 1, 2a, 2b
MeV	megavoltage
MGMT	O ⁶ -methylguanine DNA-methyltransferase
MIBG	meta-iodobenzyl guanidine
MLD	median lethal dose
MLH1	mutL homolog 1
MMC	mitomycin C
MMR	mismatch repair
MPD	mid-plane dose
MPNST	malignant peripheral nerve sheath tumour
MRC	Medical Research Council

MR	magnetic resonance
MSH	mutS homolog
MST	morphine sulphate slow-release tablets
MSU	urine microscopy and culture
MUC2	mucin 2
MUGA	multiple gated acquisition
MV	megavoltage
NHL	non-Hodgkin's lymphoma
NHS	National Health Service
NICE	National Institute for Health and Clinical Excellence
NKTL	natural killer T-cell lymphoma
NNT	needed to be treated
NPI	Nottingham Prognostic Index
NRAS	neuroblastoma RAS
NSCLC	non-small cell lung cancer
NSE	neuron specific enolase
NTRK	neurotrophic tyrosine receptor kinase
OAR	organ at risk
od	once daily
OGD	oesophagogastroduodenoscopy
OPG	orthopantomogram
p16	gene associated with HPV
PA	posteroanterior
PAX-8	pair box protein positive expression
PCA	Purkinje cell antigen
PCI	prophylactic cranial irradiation
PD-1	programmed cell death protein-1
PD-L1	programmed death-ligand1
PDGFRA	platelet-derived growth factor receptor A
PEG	percutaneous endoscopic gastrostomy
PET	positron emission tomography
PICC	peripherally inserted central catheter
PI-RADS 5	prostate imaging-reporting and data system 5
PMS2	PMS1 homolog 2
PNET	primitive neuroectodermal tumour
PNI	perineural invasion
PO	orally / by mouth
PR	progesterone receptor
PRV	planning risk volume
PSA	prostate specific antigen
PSMA	prostate-specific membrane antigen
PTV	planning target volume
PUVA	psoralen and ultraviolet-A
PV	per vaginal
qds	four times daily
REAL	Revised European-American Lymphoma classification
RECIST	Response Evaluation Criteria In Solid Tumours
RET	rearranged during transfection
RFA	radiofrequency ablation
ROS1	c-ros oncogene 1
RMI	Risk of Malignancy Index
RTOG	The Radiation Therapy Oncology Group

SABR	stereotactic ablative body radiotherapy
SC	subcutaneous
SCC	squamous cell cancer
SCF	supraclavicular fossa
SIADH	syndrome of inappropriate antidiuretic hormone
SIN	squamous intra-epithelial neoplasia
SIRT	selective internal radiotherapy
SM	setup margin
SLNB	sentinel lymph node biopsy
SLND	sentinel lymph node dissection
SPECT	single photon emission computed tomography
SR	sustained release
SRS	stereotactic radiosurgery
SSD	source-skin distance
STIR	short tau inversion recovery
SUV	standardised uptake value
SVCO	superior vena cava obstruction
TAH	total abdominal hysterectomy
TDM-1	trastuzumab emtansine
tds	three times daily
TCC	transitional-cell carcinoma
TFTs	thyroid function tests
TLCO	transfer factor for the lung for carbon monoxide
TLD	thermoluminescence dosimetry
TLH	total laparoscopic hysterectomy
TME	total mesorectal excision
TMZ	temozolomide
TNM	tumor, node, metastasis staging
TPO	thyroid peroxidase
TRUS	transrectal ultrasound
TSH	thyroid-stimulating hormone
TTF-1	thyroid transcription factor 1
TURBT	transurethral resection of bladder tumour
U&Es	urea and electrolytes
VATS	video assisted thoracoscopic surgery
VIN	vaginal intra-epithelial neoplasia
VMAT	volumetric modulated arc therapy
WHO	World Health Organisation
WLE	wide local excision

CHEMOTHERAPY REGIMENS

ABVD	doxorubicin, bleomycin, vinblastine, dacarbazine
AC	doxorubicin, cyclophosphamide
AVD	doxorubicin, vinblastine, dacarbazine
BEACOPP	bleomycin, etoposide, doxorubicin, cyclophosphamide, vinblastine, procarbazine, prednisolone
BEP	bleomycin, etoposide, cisplatin
CAP	cyclophosphamide, adriamycin, cisplatin
CAPOX	capecitabine, oxaliplatin
CAV	cyclophosphamide, doxorubicin, vincristine
CHOP	cyclophosphamide, doxorubicin, vincristine, prednisolone
CMF	cyclophosphamide, methotrexate, 5-fluorouracil
CVP	cyclophosphamide, vincristine, prednisolone

DA-EPOCH-R	dose adjusted etoposide, prednisone, vincristine, cyclophosphamide, doxorubicin, and rituximab
EC	epirubicin, cyclophosphamide
ECF	epirubicin, cisplatin, 5-fluorouracil
ECX	epirubicin, cisplatin, capecitabine
EOX	epirubicin, oxaliplatin, capecitabine
EP	etoposide, cisplatin
ESHAP	etoposide, methylprednisolone, a steroid, cytarabine (Ara-C), cisplatin (platinum)
FAC	fluorouracil, doxorubicin, cyclophosphamide
FEC	5-fluorouracil, epirubicin, cyclophosphamide
FEC-T	fluorouracil, epirubicin, cyclophosphamide, sequential Taxotere
FLOT	5-fluorouracil, oxaliplatin, leucovorin, docetaxel
FOLFIRI	folinic acid, 5-fluorouracil, irinotecan
FOLFIRINOX	folinic acid, 5-fluorouracil, irinotecan, oxaliplatin
FOLFOX	5-fluorouracil, leucovorin, oxaliplatin
GEM-R-CVP	gemcitabine, rituximab, cyclophosphamide, vincristine, prednisolone
IE	ifosfamide, etoposide
MAP	high-dose methotrexate, doxorubicin, cisplatin
MVAC	methotrexate, vinblastine, doxorubicin, cisplatin
PCV	procarbazine, CCNU, vincristine
PHESGO	pertuzumab, trastuzumab, hyaluronidase-zzxf
R-CHOP	rituximab, cyclophosphamide, doxorubicin, vincristine, prednisolone
R-CVP	rituximab, cyclophosphamide, vincristine, prednisolone
	dexamethasone, methotrexate, ifosfamide, L-asparaginase, etoposide
SMILE	
TIP	paclitaxel, ifosfamide, cisplatin
VAC	vincristine, dactinomycin, cyclophosphamide
VDC	vincristine, doxorubicin, cyclophosphamide
VEPEMB	vinblastine, cyclophosphamide, procarbazine, etoposide, mitoxantrone, bleomycin
XELOX	oxaliplatin, capecitabine

July 2023