

檢驗醫學科生物參考區間修訂20191207起

檢驗項目	單位	新機台生物參考區間	原機台生物參考區間
Total Protein	g/dL	6.4-8.9 g/dL	6.4-8.2 g/dL
Albumin-BCG	g/dL	3.5-5.7 g/dL	3.2-4.8 g/dL
Globulin	g/dL	N/A	2.5 - 3.5 g/dL
ALP	IU/L	34-104 IU/L	45-129 U/L
ALT	U/L	7-52 U/L	10-49 IU/L
Ammonia	μmol/L	18 - 72 μmol/L	11 - 32 umol/L
Amylase	U/L	29-103 U/L	30-118 U/L
AST	U/L	13-39 U/L	10-34 IU/L
BUN	mg/dL	7-25 mg/dL	9-23 mg/ dL
BUN-U	g/day	Urine :7-16 g/day	12-20 g/day
Calcium	mg/dL	2.20 – 2.65 mmol/L	Serum:2.08-2.65mmol/L
Calcium-U	mmol/day	Urine :2.5-7.5 mmol/day	Urine:2.50-7.50 mmol/day
Cholesterol Total	mg/dL	<200 mg/dL	130-200 mg/dL

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Chloride	mmol/L	98-107 mmol/L	Serum:99 - 109 mmol /L
Chloride-U	mmol/day	Urine :110-250 mmol/day	Urine:110 - 250 mmol /day
CK	IU/L	30-223 IU/L	Males:32 - 294 U/L Females:33 - 211 U/L
Creatinine	mg/dL	M: 0.7-1.3 mg/dL F: 0.6-1.2 mg/dL	Males:0.7-1.3 mg/dL Females:0.5-1.1 mg/dL
CRP	mg/dL	< 1.0 mg/dL	<0.5 mg/dL
Bilirubin Direct	mg/dL	≤ 0.2 mg/dL	≤ 0.3 mg/dL
Ethanol	mg/dL	<10 mg/dL	<10 mg/dL
Glucose AC	mg/dL	70-100 mg/dL	74 - 106 mg/dL
Glucose-CSF	mg/dL	CSF: Adult: 40-70 mg/dL Child: 60-80 mg/dL	CSF:40-70 mg/dL
HDL-Cholesterol	mg/dL	男: >40 mg/dL 女: >50 mg/dL	男: >40 mg/dL 女: >50 mg/dL
Iron	ug/dL	50-212 ug/Dl	Males:65-175 µg/dL Females:50-170 µg/dL
Potassium	mmol/L	3.5-5.1	3.5 - 5.5 mmol/L
Potassium-U	mmol /day	Urine :25-125 mmol /day	Urine :25 - 125 mmol /day
Lactate	mmol/L	0.5-2.2 mmol/L	0.5-2.20 mmol/L

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Lactate(CSF)	mmol/L	neonate : 1.1- 6.7 mmol/L 3-10 days old : 1.1- 4.4 mmol/L >10 days old : 1.1- 2.8 mmol/L adult : 1.1- 2.4 mmol/L	
LDH	IU/L	140-271 IU/L	120-246 U/L
LDL-Cholesterol	mg/dL	< 100 mg/dL	< 100 mg/dL
Lipase	IU/L	11-82 IU/L	12-53 U/L
Micro Albumin	mg/dL	Urine: Normal: < 30 mg/day Moderately increased: 30-299 mg/day Clinical Albuminuria >= 300 mg/day	Microalb:<3.0 mg/dL Microalbumin/Creatinine ratio(ACR):<30 mg/dL
Magnesium	mg/dL	1.9-2.7 mg/dL	Serum:1.3-2.7 mg/dL
Magnesium-U	mg/day	Urine :24-255 mg/day	Urine:73-122 mg/day
Total Protein-CSF	mg/dL	Adult: 15-45 mg/dL newborn (1mon): 15-130 mg/dL	CSF : 8-32mg/dL
Urine Protein	mg/dL	50-80 mg/24h at rest, Value may increase to up to 300 mg/24 h following exercise.	Urine: 1-14 mg/dL 50-80 mg/day
Sodium	mmol/L	136-145 mmol/L	Serum:132 - 146 mmol/L
Sodium-U	mmol /day	Urine :40-220 mmol /day	Urine :40 - 220 mmol /day
Phosphorus	mg/dL	2.5-5 mg/dL	Serum:2.4-5.1 mg/dL

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r-GT	IU/L	9-64 IU/L	Males:<73 U/L Females:<38 U/L
Bilirubin Total	mg/dL	0.3-1.0 mg/dL	0.3-1.2 mg/dL
UIBC	μg/dL	155-355 μg/dL	ND
TIBC	μg/dL	205 - 567 μg/dL	250 - 450 μg/dL
Transferrin	mg/dL	200-360 mg/dL	200-360 mg/dL
Triglyceride	mg/dL	<150 mg/dL	35-150 mg/dL
Uric Acid	mg/dL	M: 4.4-7.6 mg/dL F: 2.3-6.6 mg/dL	Males:3.5-7.2 mg/dL Females:2.6-6.0 mg/dL
Uric Acid-U	mg/day	M: 250-800 mg/day F: 250-750 mg/day	250-750 mg/day
Acetaminophen	ug/mL	Normal therapeutic doses : 10–30 μg/mL	10 – 30 ug/mL
Antistreptolysin O	IU/mL	<2yrs: <50 IU/mL 2-5yrs: <100 IU/mL , 5-19yrs: <166 IU/mL Adults: <=250 IU/mL	<200 IU/mL
Complement 3,C3	mg/dL	87-200 mg/dL	90-180 mg/dL
Complement 4,C4	mg/dL	19-52 mg/dL	10-40 mg/dL
CKMB-MASS	ng/mL	0.6-6.3 ng/mL	

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Valproic acid	ug/mL	50–100 µg/mL	50 – 100 ug/mL
Phenytoin	ug/mL	Most patients achieve a satisfactory therapeutic response in the serum concentration range of 10–20 µg/mL (40–79 µmol/L). Further, peak concentrations above 20 µg/mL (79 µmol/L) are often associated with toxicity.	10 – 20 ug/mL
Lithium	mmol/L	12 hour post dose trough concentration: 1.0 - 1.2 mmol/L Minimum effective concentration: 0.6 mmol/L Values > 1.5 mmol/L 12 hours after dose indicates a significant risk of intoxication.	0.6 – 1.2 mmol/L
Phenobarbital	ug/mL	10–40 µg/mL	15 – 40 ug/mL
Ferritin	ng/mL	Males: 23.9-336.2 ng/mL; Females: 11.0-306.8 ng/mL	Males: 22-322 ng/mL Females: 10-291 ng/mL
Homocysteine	µmol/L	5 - 15 µmol/L	3.7-13.9 µmol/L
Cystatin C	mg/L	0.57 - 1.01 mg/L	0.62-1.11 mg/L
IgA	mg/dL	66-433 mg/dL	70-400 mg/dL
IgM	mg/dL	45-281 mg/dL	40-230 mg/dL

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IgG	mg/dL	635-1741 mg/dL	Blood:700-1600 mg/dL CSF:<3.4 mg/dL
Prealbumin	mg/dL	17-34 mg/dL	20-40 mg/dL
Rheumatoid Factor, RF	IU/mL	<=14 IU/mL	<15 IU/mL
Amphetamine	ng/mL	Cutoff Level: 500 ng/mL	< 500 ng/mL
Benzodiazepine	ng/mL	Cutoff Level: 200 ng/mL	< 200 ng/mL
Opiates	ng/mL	Cutoff Level: 300 ng/mL	< 300 ng/mL
Carbamazepine	ug/mL	Therapeutic effect : 4.0–12 µg/mL(17–51 µ mol/L). Further, peak concentrations above 12 µ g/mL (51 µmol/L) are often associated with toxicity	4 – 12 ug/mL

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Vancomycin	ug/mL	<p>Peak therapeutic ranges for vancomycin vary considerably. Both the dosage regimen and the timing of sample collection may affect the peak therapeutic range. For example, after completion of a 60-minute infusion of vancomycin in adults, samples drawn at 2 hours had concentrations of 18–26 µg/mL (12–17 µmol/L), samples drawn at 1 hour had concentrations of 26.5–40 µg/mL (18–27 µmol/L), and samples drawn at 30 minutes had concentrations of 30–40 µg/mL (20–27 µmol/L).</p> <p>Trough vancomycin serum concentrations of 5.0–10 µg/mL (3.4–6.7 µmol/L) usually ensure that the concentration is above the minimum inhibitory concentrations of most vancomycin-sensitive pathogens and that the drug elimination is adequate.</p> <p>For patients on concomitant vancomycin and aminoglycoside treatment, peak vancomycin concentrations exceeding 30 µg/mL (20 µmol/L) and trough concentrations above 10 µg/mL (6.7 µmol/L) are associated with nephrotoxicity. Serum concentrations above 80 µg/mL (54 µmol/L) are associated with ototoxicity.</p>	<p>Trough: 5 – 10 ug/mL</p> <p>輸注60分鐘後的 2hr:18-26µg/mL 1hr:25-40µg/mL 30min:30-40µg/mL</p>
Theophylline	ug/mL	10–20 µg/mL	10 – 20 ug/mL
CA125	U/mL	0 - 35 U/mL	<35 U/mL

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Total PSA	ng/mL	0 - 4 ng/mL	<=4 ng/mL
Free PSA	ng/mL	FPSA:NA FPSA/TPSA ratio: 0-10% free PSA: 56% Probability of Cancer ; 10-15% free PSA: 28% Probability of Cancer ; 15-20% free PSA: 20% Probability of Cancer ; 20-25% free PSA: 16% Probability of Cancer ; >25% free PSA: 8% Probability of Cancer	FPSA<2.5 ng/mL FPSA/TPSA ratio >18%
Digoxin	ng/mL	< 2.0 ng/mL	0.9 – 2.0 ng/mL
AFP	ng/mL	0-9 ng/mL	<8.1 ng/mL
Myoglobin	ng/mL	Females: 14.3-65.8 ng/mL Males: 17.4-105.7 ng/mL	Females: 9-82 ug/L Males: 16-96 ug/L
Anti-Thyroglobulin Antibody, aTG	IU/mL	< 4.0 IU/mL	<60 U/mL
Anti-Thyroid Peroxidase Antibody, aTPO	IU/mL	≤ 9 IU/mL	<60 U/mL
CA153	U/mL	< 23.5 U/mL	<32.4 U/mL
CA199	U/mL	< 35 U/mL	<37 U/mL

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CEA	ng/mL	0.0–3.0 ng/mL	不吸菸<3.5 ng/mL 吸菸<5.0 ng/mL
Cortisol	ug/dL	AM: 6.7 - 22.6 ug/dL; PM: <10 ug/dL Urine:21 – 111 µg/24hrs	7-9AM 5.27-22.45 ug/dL 3-5 PM 3.44-16.76 ug/L Urine: 20.9~292.3 ug/24hrs
Estradiol	pg/mL	Non-pregnant females: Early Follicular: 22.4-115 pg/mL Mid Follicular: 25.0-115 pg/mL Ovulatory Peak: 32.1-517 pg/mL Mid Luteal: 36.5-246 pg/mL Post-Menopausal Females: Not on hormone therapy: <15.0-25.1 pg/mL Males:≥ 19 years old: <15.0-31.5 pg/mL	男性:11-44 pg/mL 正常女性的月經 卵泡期:21-251 月經中期:38-649 黃體期:21-312 停經後女性:<10-28
Folic Acid	ng/mL	WHO deficient folate concentrations: < 4 ng/mL	>5.38 ng/mL
Follicle Stimulating Hormone, FSH	mIU/mL	Males: 1.27-19.26 mIU/mL; Females: Postmenopausal: 16.74-113.59 mIU/mL; Females: Mid-Follicular Phase: 3.85-8.78 mIU/mL; Females: Mid-Cycle Peak: 4.54-22.51 mIU/mL; Females: Mid-Luteal Phase: 1.79-5.12 mIU/mL	Males:1.4-18.1 mIU/mL Females Follicular phase 2.5-10.2 Midcycle peak 3.4-33.4 Luteal phase 1.5-9.1 Pregnant <0.3 Postmemopausal 23-116.3
Free Thyroxine, FT4	ng/dL	0.63 - 1.18 ng/dL	0.89-1.76 ng/dL

檢驗項目	單位	新機台生物參考區間	原機台生物參考區間
hs Troponin I	pg/mL	99th Percentile URL: <17.5 pg/mL	< 19 ng/L
Insulin	uIU/mL	1.9–23 uIU/mL	3.0-25.0 mU/L
Leuteinizing Hormone, LH	mIU/mL	Males: 1.24-8.62 mIU/mL; Females: Postmenopausal: 10.87-58.64 mIU/mL; Females: Mid-Follicular Phase: 2.12-10.89 mIU/mL; Females: Mid-Cycle Peak: 19.18-103.03 mIU/mL; Females: Mid-Luteal Phase: 1.20-12.86 mIU/mL	Males 20-70 years: 1.5-9.3 mIU/mL >70 years: 3.1-34.6 Childrens: <0.1-6.0 Females Follicular phase 1.9-12.5 Midcycle peak 8.7-76.3 Luteal phase 0.5-16.9 Pregnant <0.1-1.5 Postmemopausal 15.9-54.0 Contraceptives 0.7-5.6
Progesterone	ng/mL	Males: 0.14-2.06 ng/mL Females: Postmenopausal: <0.08-0.78 ng/mL Females: Mid-Follicular Phase: 0.31-1.52 ng/mL Females: Mid-Luteal Phase: 5.16-18.56 ng/mL Pregnancy: First trimester: 4.73-50.74 ng/mL Pregnancy: Second trimester: 19.41-45.30 ng/mL	Males 0.28-1.22 ng/mL Females : Follicular: 0.15-1.40 Midcycle: 4.44-28.03 Luteal: 3.34-25.56 Postmen: ND-0.73 Pregnant : 1 st .tri. 11.22-90.00 2 nd .tri. 25.55-89.04 3 rd .tri. 48.4-422.5

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Prolactin	ng/mL	Males: 2.64-13.13 ng/mL; Females: Premenopausal: 3.34-26.72 ng/mL; Females: Postmenopausal: 2.74-19.64 ng/mL;	Males: 2.1-17.7 ng/mL Females Nonpregnant:2.8-29.2 Pregnant: 9.7-208.5 Postmemopausal 1.8-20.3
Rubella IgG	IU/mL	Negative:<10 IU/mL Equivocal: ≥10 -<15 IU/mL Positive: ≥15 IU/mL	Negative<5.0 IU/mL Equivocal 5.0-9.9 IU/mL Positive ≥10.0 IU/mL
Triiodothyronine, T3	ng/mL	0.87 - 1.78 ng/mL	60-181 ng/dL
Thyroxine,T4	ug/dL	5.7 - 10.91 ug/dL	4.5-10.9 ug/dL
B-HCG	mIU/mL	Non-pregnant Females: < 5 mIU/mL	Negative<10 mIU/mL 懷孕2-4週:39.1-8388 5-6週:861-88769 6-8週:8636-218085 8-10週:18700-244467 10-12週:23143-181899 13-27週:6303-97171 28-40週: 4360-74883
Thyroid Stimulating Hormone, TSH	μIU/mL	0.38 - 5.33 μIU/mL	小孩:0.64-6.27 μIU/mL 成人:0.55-4.78 μIU/mL

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Testosterone	ng/dL	serum: male: 175-781 ng/dL; serum: female: 10-75 ng/dL	Males : 165-753 ng/dL Females: 12-59 ng/dL
Vitamin B12	pg/mL	180-914 pg/mL	211-911 pg/mL 缺乏:32-246 pg/mL