

APL Laboratory Reference Intervals June 2019

These intervals are valid for analyses performed by Laboratory Services, Edmonton Zone unless otherwise specified.

Name of Test	Reference Intervals (\$ 18 years)		Units	Effective Date
	Males	Females		
WBC	4.0-11.0	4.0-11.0	10 ⁹ /L	09/04/96
RBC	4.50-6.00	4.10-5.20	10 ¹² /L	09/04/96- 18/02/01
RBC	4.30-6.00	3.80-5.20	10 ¹² /L	19/02/01
Hemoglobin	135-175	120-160	g/L	27/06/96
Hematocrit	0.41-0.52	0.36-0.46	L/L	09/04/96
MCV	80-100	80-100	fL	09/04/96
MCHC	320-360	320-360	g/L	09/04/96- 06/07/11
MCHC	310-360	310-360	g/L	07/07/11
RDW	<15.6	<15.6	%	09/04/96
Platelet	140-450	140-450	10 ⁹ /L	09/04/96
Neutrophils	1.8-7.5	1.8-7.5	10 ⁹ /L	09/04/96
Lymphocytes	1.0-4.5	1.0-4.5	10 ⁹ /L	09/04/96
Monocytes	0.0-1.1	0.0-1.1	10 ⁹ /L	09/04/96
Eosinophils	0.0-0.7	0.0-0.7	10 ⁹ /L	09/04/96
Basophils	0.0-0.3	0.0-0.3	10 ⁹ /L	09/04/96
Bands	0-11	0-11	%	09/04/96- 06/10/09
NOTE: Only cells observed on the smear will be reported. As of 07OCT2009, Laboratory Services no longer reports bands as part of a differential.				
PT/INR	0.8-1.2	0.8-1.2		09/04/96
PTT (CH UAH Site)	24-34	24-34	seconds	15/01/97- 01/02/98
PTT (CH UAH Site)	25-35	25-35	seconds	02/02/98- 15/12/98
PTT (CH UAH Site)	25-35	25-35	seconds	16/12/98- 31/05/00
PTT (CH UAH Site)	24-36	24-36	seconds	01/06/00- 31/05/01
PTT (CH UAH Site)	23-33	23-33	seconds	01/06/01- 31/05/03
PTT (CH UAH Site)	25-33	25-33	seconds	01/06/03- 03/05/04
PTT (CH UAH Site)	24-35	24-35	seconds	04/05/04- 25/07/05

Name of Test	Reference Intervals (\$ 18 years)		Units	Effective Date
	Males	Females		
PTT (CH UAH Site)	27-39	27-39	seconds	26/07/05-31/07/06
PTT (CH UAH Site)	29-40	29-40	seconds	01/08/06-24/10/07
PTT (CH UAH Site)	27-40	27-40	seconds	25/10/07-01/12/08
PTT (AHS UAH, RAH, GNH, & MIS Sites)	29-43	29-43	seconds	02/12/08-29/03/10
PTT (AHS UAH, RAH, GNH, & MIS Sites)	27-39	27-39	seconds	30/03/10-16/05/11
PTT (CCI Site)	27-39	27-39	seconds	29/06/10-16/05/11
PTT (AHS RAH, GNH, & MIS Sites)	23-32	23-32	seconds	02/02/98-14/12/98
PTT (AHS RAH, GNH, & MIS Sites)	22-30	22-30	seconds	15/12/98-27/05/02
PTT (AHS RAH, GNH, & MIS Sites)	20-30	20-30	seconds	28/05/02-31/05/03
PTT (AHS RAH, GNH, & MIS Sites)	22-31	22-31	seconds	01/06/03-25/07/05
PTT (AHS RAH, GNH, & MIS Sites)	22-37	22-37	seconds	26/07/05-06/06/08
PTT (AHS RAH, MIS & GNH Sites)	27-40	27-40	seconds	03/06/08-01/12/08
PTT (AHS UAH, RAH, GNH & MIS Sites)	27-39	27-39	seconds	17/05/11-25/11/15
PTT (AHS UAH, RAH, GNH & MIS Sites)	29-43	29-43	seconds	26/11/15-20/03/17
PTT (AHS UAH, RAH, GNH & MIS Sites)	27-38	27-38	seconds	21/03/17-26/06/18
PTT (AHS UAH, RAH, GNH & MIS Sites)	27-39	27-39	seconds	27/06/18
PTT (DKML)	23-32	23-32	seconds	02/02/98-14/12/98
PTT (DKML)	22-30	22-30	seconds	15/12/98-27/05/02
PTT (DKML)	20-30	20-30	seconds	28/05/02-31/05/03

Name of Test	Reference Intervals (\$ 18 years)		Units	Effective Date
	Males	Females		
PTT (DKML)	22-31	22-31	seconds	01/06/03-25/07/05
PTT (DKML)	22-37	22-37	seconds	26/07/05-24/10/07
PTT (DKML)	26-38	26-38	seconds	25/10/07-01/12/08
PTT (DynaLIFE DX)	27-42	27-42	seconds	02/12/08-17/03/10
PTT (DynaLIFE DX)	25-35	25-35	seconds	18/03/10-03/07/11
PTT (DynaLIFE DX)	22-34	22-34	seconds	04/07/11-31/10/12
PTT (DynaLIFE DX)	26-38	26-38	seconds	01/11/12-08/10/18
PTT (DynaLIFE DX)	28-40	28-40	seconds	09/10/18
Thrombin time	12.6-20.7	12.6-20.7	seconds	21/08/01-10/01/02
Thrombin time	14.4-18.5	14.4-18.5	seconds	11/01/02-01/11/02
Thrombin time	14.6-17.5	14.6-17.5	seconds	02/11/02-02/09/03
Thrombin time	15.3-18.8	15.3-18.8	seconds	03/09/03-20/05/04
Thrombin time	16.3-19.1	16.3-19.1	seconds	21/05/04-25/04/05
Thrombin time	15.8-18.6	15.8-18.6	seconds	26/04/05-25/04/06
Thrombin time	15.6-18.9	15.6-18.9	seconds	26/04/06-12/12/06
Thrombin time	15.2-18.8	15.2-18.8	seconds	13/12/06-09/11/10
Thrombin time	14.3-19.7	14.3-19.7	seconds	10/11/10
Fibrinogen (AHS UAH Site)	1.7-3.9	1.7-3.9	g/L	29/02/96-15/12/98
Fibrinogen (AHS UAH Site)	2.1-4.2	2.1-4.2	g/L	16/12/98-13/08/04
Fibrinogen (AHS UAH Site)	2.3-4.5	2.3-4.5	g/L	14/08/04-28/02/05
Fibrinogen (AHS UAH Site)	2.2-4.2	2.2-4.2	g/L	01/03/02-02/06/08
Fibrinogen (AHS)	1.9-4.1	1.9-4.1	g/L	03/06/08
Fibrinogen (DKML)	1.6-4.7	1.6-4.7	g/L	03/06/97-14/12/98
Fibrinogen (DKML)	1.6-3.6	1.6-3.6	g/L	15/12/98-02/05/99

Name of Test	Reference Intervals (\$ 18 years)		Units	Effective Date
	Males	Females		
Fibrinogen (DKML)	2.5-4.1	2.5-4.1	g/L	03/05/99- 31/08/04
Fibrinogen (DKML)	1.9-4.1	1.9-4.1	g/L	01/09/04- 02/08/06
Fibrinogen (DKML)	2.1-4.4	2.1-4.4	g/L	03/08/06
D Dimer (AHS UAH Site)	<0.5	<0.5	mg/L	09/04/96- 02/06/08
D Dimer (AHS UAH, RAH, GNH and MIS Sites)	<0.50	<0.50	mg/L	03/06/08- 29/09/08
D Dimer (DKML)	<0.5	<0.5	mg/L	09/04/96- 02/07/02
D Dimer (DKML)	<0.4	<0.4	mg/L	03/07/02- 29/09/08
D Dimer Quantitation (AHS All Sites)	<0.50	<0.50	mg/L	14/05/08
D Dimer Quantitation (DynaLIFE)	<0.46	<0.46	mg/L	14/05/08- 20/09/12
D Dimer Quantitation (DynaLIFE)	<0.50	<0.50	mg/L	21/09/12
Protein C	0.62-1.56	0.62-1.56	U/mL	09/04/96- 16/12/98
Protein C	0.74-1.78	0.74-1.78	U/mL	17/12/98- 03/05/04
Protein C	0.82-1.74	0.82-1.74	U/mL	04/05/04- 21/12/09
Protein C	>0.81	>0.81	U/mL	22/12/09- 09/04/12
Protein C	>0.68	>0.68	U/mL	10/04/12
Protein S	0.55-1.33	0.55-1.33	U/mL	09/04/96- 16/12/98
Protein S	0.62-1.22	0.62-1.22	U/mL	17/12/98- 03/05/04
Protein S	0.61-1.51	0.61-1.51	U/mL	04/05/04- 21/12/09
Protein S	>0.60	>0.60	U/mL	22/12/09- 02/07/13
Protein S	>0.69	>0.49	U/mL	03/07/13
Antithrombin III	0.74-1.18	0.74-1.18	U/mL	09/04/96- 14/01/97
Antithrombin III	0.89-1.37	0.89-1.37	U/mL	15/01/97- 17/11/97
Antithrombin III	0.84-1.24	0.84-1.24	U/mL	18/11/97- 16/12/98

Name of Test	Reference Intervals (\$ 18 years)		Units	Effective Date
	Males	Females		
Antithrombin III	0.88-1.28	0.88-1.28	U/mL	17/12/98-03/05/04
Antithrombin III	0.87-1.29	0.87-1.29	U/mL	04/05/04-21/06/10
Antithrombin III	>0.82	>0.82	U/mL	22/06/10
Factor 7	0.50-1.50	0.50-1.50	Fraction of normal	09/04/96
Factor 8	0.50-1.50	0.50-1.50	Fraction of normal	09/04/96
Factor 8 Inhibitor	0	0	BU/mL	09/04/96
VWF Antigen	0.48-1.76	0.48-1.76	U/mL	09/04/96-12/02/98
VWF Antigen	0.51-1.43	0.51-1.43	U/mL	13/02/98-16/12/98
VWF Antigen	0.58-1.94	0.58-1.94	U/mL	17/12/98-03/05/04
VWF Antigen	0.51-1.72	0.51-1.72	U/mL	04/05/04-09/04/12
VWF Antigen	>0.49	>0.49	U/mL	10/04/12
Ristocetin Cofactor	0.50-1.34	0.50-1.34	U/mL	17/12/98-27/07/04
Ristocetin Cofactor	0.47-1.44	0.47-1.44	U/mL	28/07/04-17/12/04
Ristocetin Cofactor	0.56-1.78	0.56-1.78	U/mL	18/12/04-09/04/12
Ristocetin Cofactor	>0.49	>0.49	U/mL	10/04/12
Reticulocyte	0.4-2.0 20.0-90.0	0.4-2.0 20.0-90.0	% 10 ⁹ /L	09/04/96
CSF WBC	0-5	0-5	10 ⁶ /L	09/07/99
CSF RBC	0	0	10 ⁶ /L	09/07/99-16/01/17
CSF RBC	<5	<5	10 ⁶ /L	17/01/17
CSF glucose (CCI)	2.2-4.1	2.2-4.1	mmol/L	30/12/97-02/06/98
CSF glucose (AHS)	2.2-4.4	2.2-4.4	mmol/L	10/04/96-02/06/98
CSF glucose	2.2-4.4	2.2-4.4	mmol/L	03/06/98
CSF protein	0.15-0.45	0.15-0.45	g/L	10/04/96
ESR (CH)	# 10	#15	mm/h	09/04/96-07/11/04
ESR	# 15	#20	mm/h	08/11/04

Name of Test	Reference Intervals (\$ 18 years)		Units	Effective Date
	Males	Females		
Sodium	135-150	135-150	mmol/L	06/12/96-30/06/98
Sodium (CCI)	133-150	133-150	mmol/L	30/12/96-03/11/98
Sodium	133-146	133-146	mmol/L	01/07/98
Potassium (AHS UAH Site, plasma)	3.5-5.0	3.5-5.0	mmol/L	01/05/97-26/10/03
Potassium (AHS UAH Site, plasma)	3.3-4.8	3.3-4.8	mmol/L	27/10/03-23/09/13
Potassium (AHS RAH, MIS, GNH, CCI and DynaLIFE Sites, serum)	3.5-5.0	3.5-5.0	mmol/L	01/05/97-06/05/19
Potassium (CCI)	3.5-5.0	3.5-5.0	mmol/L	28/06/10-23/09/13
Potassium (AHS UAH and CCI Sites, plasma)	3.3-4.8	3.3-4.8	mmol/L	24/09/13-07/05/19
Potassium (APL)	3.5-5.0	3.5-5.0	mmol/L	08/05/19
Potassium (DynaLIFE)	3.5-5.2	3.5-5.2	mmol/L	08/05/19
Chloride	96-107	96-107	mmol/L	09/04/96-30/03/03
Chloride	92-110	92-110	mmol/L	31/03/03-07/09/05
Chloride	96-110	96-110	mmol/L	08/09/05-17/04/08
Chloride	96-107	96-107	mmol/L	18/04/08-03/01/12
Chloride	96-109	96-109	mmol/L	04/01/12
Bicarbonate	23-31	23-31	mmol/L	09/04/96
Anion gap	6-16	6-16	mmol/L	09/04/96-31/05/99
Anion gap	4-16	4-16	mmol/L	01/06/99
Glucose -fasting	3.3-6.4	3.3-6.4	mmol/L	25/04/96-31/01/99
Glucose -fasting	3.3-6.0	3.3-6.0	mmol/L	01/02/99
Glucose -random	3.3-11.1	3.3-11.1	mmol/L	25/04/96-21/06/99

Name of Test	Reference Intervals (\$ 18 years)		Units	Effective Date
	Males	Females		
Glucose -random	3.3-11.0	3.3-11.0	mmol/L	22/06/99
Creatinine	45-125	40-115	μmol/L	06/12/96- 15/09/08
Creatinine	50-115	50-105	μmol/L	16/09/08- 28/11/16
Creatinine	50-120	40-100	μmol/L	29/11/16
Calculated GFR (CKD-EPI Equation)	≥ 60	≥ 60	mL/min/ 1.73m ²	24/04/13
Cystatin C	0.54-0.94	0.48-0.82	mg/L	22/04/15
Total protein	60-80	60-80	g/L	10/04/96- 31/05/99
Total protein	64-84	64-84	g/L	01/06/99
Albumin	35-50	35-50	g/L	09/04/96- 30/03/03
Albumin	33-51	33-51	g/L	31/03/03- 20/04/03
Albumin	35-50	35-50	g/L	21/04/03
ALP	30-130	30-130	U/L	09/04/96
ALT (SGPT)	<50	<50	U/L	09/04/96
Total bilirubin	<20	<20	μmol/L	09/04/96
Conjugated bilirubin	<7	<7	μmol/L	09/04/96
CK	< 180	< 150	U/L	09/04/96- 30/11/04
CK ¹	< 250	< 200	U/L	01/12/04
CKMB (mass)	<10	<10	μg/L	19/01/99
FRMB (fraction MB)	<0.05	<0.05		09/04/96
Troponin I	<0.5	<0.5	μg/L	09/04/96- 18/01/99
Troponin I	<0.2	<0.2	μg/L	19/01/99- 03/04/02
Troponin I ²	<0.15	<0.15	μg/L	04/04/02- 14/01/18
Troponin I ² (All sites except RAH & NEC)	<0.15	<0.15	μg/L	04/04/02- 14/04/19
Troponin I (RAH & NEC)	≤0.04	≤0.04	μg/L	15/01/18- 14/04/19
Troponin I ² (UAH, Devon Hospital, East Edmonton HC, Fort Saskatchewan Hospital, Redwater HC, Strathcona Hospital, & Westview HC)	<0.15	<0.15	μg/L	15/04/19

Name of Test	Reference Intervals (\$ 18 years)		Units	Effective Date
	Males	Females		
Troponin I (RAH, Leduc Hospital, GNH, Sturgeon Hospital, MIS & NEC)	≤0.04	≤0.04	µg/L	15/04/19
BNP	Very Likely: >500 Possible, but other diagnoses must be considered: 100-500 Unlikely: <100	Very Likely: >500 Possible, but other diagnoses must be considered: 100-500 Unlikely: <100	pg/mL	11/10/07
AST (SGOT)	<40	<40	U/L	09/04/96
GGT (gamma-GT)	<70	<55	U/L	10/04/96
Amylase	25-115	25-115	U/L	09/04/96-30/03/03
Amylase	36-128	36-128	U/L	31/03/03-26/10/03
Amylase	36-150	36-150	U/L	27/10/03-11/08/10
Amylase	30-150	30-150	U/L	12/08/10
Lipase (CH UAH Site)	<190	<190	U/L	09/04/96-29/07/01
Lipase (CH UAH Site)	23-300	23-300	U/L	30/07/01-05/07/10
Lipase (DKML)	23-300	23-300	U/L	09/04/96-05/07/10
Lipase	0-60	0-60	U/L	06/07/10
LD	100-225	100-225	U/L	06/12/96
Calcium	2.10-2.60	2.10-2.60	mmol/L	09/04/96
Ionized calcium (pH adjusted)	1.17-1.34	1.17-1.34	mmol/L	10/04/96-29/10/98
Ionized calcium (pH adjusted) Calcium	1.09-1.25	1.09-1.25	mmol/L	30/10/98
Phosphorus	0.80-1.45	0.80-1.45	mmol/L	09/04/96
Magnesium	0.70-1.00	0.70-1.00	mmol/L	12/04/96
Uric acid	180-500	150-400	µmol/L	10/04/96
Zinc	8.0-20.0	8.0-20.0	µmol/L	09/04/96
Urea	2.5-8.0	2.5-8.0	mmol/L	10/04/96
hCG	<5	<5	U/L	09/04/96
Lactate	0.5-2.2	0.5-2.2	mmol/L	09/04/96
Prealbumin	0.100-0.400	0.100-0.400	g/L	09/04/96
Transferrin	1.8-3.5	1.8-3.5	g/L	09/04/96

Name of Test	Reference Intervals (\$ 18 years)		Units	Effective Date
	Males	Females		
Folate, RBC	>250	>250	nmol/L	16/04/96-04/11/07
Folate, serum/plasma	>12	>12	nmol/L	05/11/07-08/02/12
Folate, serum/plasma	>13	>13	nmol/L	09/02/12-06/12/16
Folate, serum/plasma	>9.9	>9.9	nmol/L	07/12/16
Plasma hemoglobin	<51	<51	mg/L	16/04/96-22/08/08
Plasma hemoglobin	<50	<50	mg/L	23/08/08
HbA1c	0.043-0.061	0.043-0.061		19/04/96-02/05/04
HbA1c	4.3-6.1	4.3-6.1	%	03/05/04
Ferritin	Iron deficient: <12 Iron excess: >1000	Iron deficient: <12 Iron excess: >1000	µg/L	16/04/96-20/09/99
Ferritin	12-300	12-300	µg/L	21/09/99
Vitamin B12	>150	>150	pmol/L	16/04/96
TSH	0.20-6.10	0.20-6.10	mU/L	16/04/96-04/09/01
TSH	0.20-4.00	0.20-4.00	mU/L	05/09/01
FT4	9.0-19.0	9.0-19.0	pmol/L	03/12/96-17/08/98
FT4	9.0-23.0	9.0-23.0	pmol/L	18/08/98
T4	60-160	60-160	nmol/L	09/04/96-21/06/06
Free T4 index	60-160	60-160		09/04/96
FT3	3.5-7.3	3.5-7.3	pmol/L	17/09/96-22/01/07
FT3	3.5-6.5	3.5-6.5	pmol/L	23/01/07
T3	0.9-2.8	0.9-2.8	nmol/L	16/04/96-21/06/06
Free T3 index	0.9-2.8	0.9-2.8		16/04/96
T3 Uptake	0.22-0.37	0.22-0.37		16/04/96-21/06/06
Iron	8-25	8-25	µmol/L	09/04/96-26/10/15
Iron	8-30	6-28	µmol/L	27/10/15
TIBC	40-80	40-80	µmol/L	09/04/96
Transferrin	1.8-3.5	1.8-3.5	g/L	09/04/96
α-Fetoprotein	<10	<10	kU/L	16/04/96-14/06/04

Name of Test	Reference Intervals (\$ 18 years)		Units	Effective Date
	Males	Females		
α-Fetoprotein	<7	<7	kU/L	15/06/04-31/10/05
α-Fetoprotein	<9	<9	kU/L	01/11/05
PTH	1.1-6.8	1.1-6.8	pmol/L	09/04/96-19/04/11
PTH	1.4-6.8	1.4-6.8	pmol/L	20/04/11
25-OH vitamin D	80-200	80-200	nmol/L	09/04/96
Vitamin A	1.5-3.5	1.5-3.5	μmol/L	09/04/96
Vitamin E	12-45	12-45	μmol/L	16/04/96
Carotene	1.0-5.0	1.0-5.0	μmol/L	09/04/96
Haptoglobin	0.65-1.90	0.65-1.90	g/L	09/04/96-20/07/11
Haptoglobin	0.30-2.00	0.30-2.00	g/L	21/07/11
Rheumatoid factor	<20	<20	kU/L	19/04/96
C-reactive protein (UAH)	<8.0	<8.0	mg/L	16/04/96
C-reactive protein (UAH, MIS, GNH, RAH, SGH & DynaLIFE)	<8.0	<8.0	mg/L	15/07/14
C-reactive protein (FSH, LEH, NEC, SPK, & STO)	<8.0	<8.0	mg/L	12/12/17
Homocysteine	<12.1	<12.1	μmol/L	01/06/98
Lp(a)	<0.30	<0.30	g/L	09/04/96
Cortisol (AM)	120-620	120-620	nmol/L	16/04/96
Cortisol (PM)	85-460	85-460	nmol/L	16/04/96
Cortisol (Random)	85-620	85-620	nmol/L	16/04/96
Antitransglutaminase	<4	<4	U/mL	01/04/01-14/08/11
Antitransglutaminase	<7	<7	U/mL	15/08/11
IgG	≥ 19 Yrs: 6.94-16.18	≥ 19 Yrs: 6.94-16.18	g/L	09/04/96
IgA	0.68-3.78	0.68-3.78	g/L	09/04/96-17/06/99
IgA	0.70-4.00	0.70-4.00	g/L	18/06/99
IgM (CH UAH Site)	0.60-2.63	0.60-2.63	g/L	09/04/96-17/06/99
IgM (CH UAH Site)	0.60-3.00	0.60-3.00	g/L	18/06/99-30/03/03
IgM (CH UAH Site)	0.40-3.00	0.40-3.00	g/L	31/03/03-21/01/10
IgM (AHS UAH Site)	0.60-3.00	0.60-3.00	g/L	22/01/10

Name of Test	Reference Intervals (\$ 18 years)		Units	Effective Date
	Males	Females		
IgM (DKML)	0.60-2.63	0.60-2.63	g/L	04/04/96-17/06/99
IgM (DKML)	0.60-3.00	0.60-3.00	g/L	18/06/99
PSA	≥ 70 y <6.6 60-69 y <4.6 50-59 y <3.6 ≤ 49 y <2.6		μ g/L	20/07/10
CEA	0-3	0-3	μ g/L	20/07/10-09/12/12
CEA	<5.0	<5.0	μ g/L	10/12/12
C-peptide	0.30-1.32	0.30-1.32	nmol/L	09/04/96
Insulin (fasting)	5.0-20.0	5.0-20.0	mU/L	09/04/96-27/10/11
Insulin (fasting)	35.0-40.0	35.0-40.0	pmol/L	28/10/11
Estradiol	<200	Follicular: 70-680 Midcycle: 500-1950 Luteal: 200-780 Postmenopausal: up to 115	pmol/L	09/04/96-
Estradiol	<200	Follicular: 70-680 Midcycle: 550-1950 Luteal: 200-780 Postmenopausal: up to 115	pmol/L	
LH	<12.0	Follicular/luteal: <15.0 Midcycle: 30.0-100.0 Postmenopausal: 18.0-65.0	U/L	09/04/96
FSH	<7.0	Follicular/luteal: <7.0 Midcycle: 4.0-15.0 Postmenopausal: 16.0-80.0	U/L	09/04/96
Prolactin	<21.0	<25.0	μ g/L	09/04/96
Testosterone, random	8.0-29.5	0.6-2.0	nmol/L	16/04/96
Testosterone, AM	10.3-29.5	0.6-2.0	nmol/L	04/04/96
Testosterone, PM	8.0-26.7	0.6-2.0	nmol/L	04/04/96
Testosterone, free	33.0-130.0	0.4-23.0	pmol/L	04/04/96-20/09/99
Testosterone, free	\$41 y: 23.0-130.0 18-40 y: 30.0-130.0	0.4-23.0	pmol/L	21/09/99
Human growth hormone	<5.1	<5.1	μ g/L	09/04/96
Insulin-like GF-I	18-19y: 200-525 20-29y: 140-430 40-49y: 110-360 50-70y: 100-270 >70y: 50-240	18-19y: 200-525 20-39y: 140-430 40-49y: 110-360 50-70y: 100-270 >70y: 50-240	μ g/L	07/06/05-22/07/10

Name of Test	Reference Intervals (\$ 18 years)		Units	Effective Date
	Males	Females		
Insulin-like GF-I	18-19y: 200-525 20-29y: 115-430 30-39Y: 110-430 40-49y: 95-360 50-59y: 80-270 60-70y: 70-240 \$71y: 50-240	18-19y: 200-525 20-29y: 115-430 30-39Y: 110-430 40-49y: 95-360 50-59y: 80-270 60-70y: 70-240 \$71y: 50-240	µg/L	23/07/10- 03/07/15
Insulin-like GF-I	18-20y: 135-495 21-30y: 98-356 31-40y: 84-246 41-50y: 67-217 51-60y: 54-200 61-70y: 47-192 \$71y: 32-180	18-20y: 185-487 21-30y: 128-343 31-40y: 110-243 41-50y: 93-205 51-60y: 78-190 61-70y: 69-169 \$71y: 66-178	µg/L	04/07/15
ACTH	9-52	9-52	ng/L	09/04/96- 21/07/05
ACTH	10-46	10-46	ng/L	22/07/05- 12/02/19
ACTH	1.6-13.9	1.6-13.9	pmol/L	13/02/19
2 h Glucose Tolerance Test (after 75 g load)	Fasting: 3.5-6.4 Peak (½ - 1 ½ h): <11.1 2 h: <7.8	Fasting: 3.5-6.4 Peak (½ - 1 ½ h): <11.1 2 h: <7.8	mmol/L	25/04/96- 19/03/99
2 h Glucose Tolerance Test (after 75 g load)	Fasting: 3.3-6.0 2 h: <7.8	Fasting: 3.3-6.0 2 h: <7.8	mmol/L	20/03/99
Glucagon	<61	<61	ng/L	07/06/16
HDL	Desirable >0.90	Desirable >0.90	mmol/L	09/04/96- 05/07/10
HDL	Desirable >0.90	Desirable >1.10	mmol/L	06/07/10- 31/10/16
HDL	N/A See comment 4 at end of list	N/A See comment 4 at end of list	mmol/L	01/11/16
LDL	Desirable #17 y: < 2.80 18-29 y: < 3.00 ≥30 y: < 3.40	Desirable #17 y: < 2.80 18-29 y: < 3.00 ≥30 y: < 3.40	mmol/L	06/07/10- 31/10/16
LDL	≤3.40	≤3.40	mmol/L	01/11/16
Cholesterol	Desirable ≤17 y: < 4.40 18-29 y: < 4.60 ≥30 y: < 5.20	Desirable ≤17 y: < 4.40 18-29 y: < 4.60 ≥30 y: < 5.20	mmol/L	09/04/96- 05/07/10
Cholesterol	Desirable <6.20	Desirable <6.20	mmol/L	06/07/10- 31/10/16

Name of Test	Reference Intervals (\$ 18 years)		Units	Effective Date
	Males	Females		
Cholesterol (single test)	Desirable <5.17	Desirable <5.17	mmol/L	01/11/16
Cholesterol (lipid profile)	N/A See comment 4 at end of list	N/A See comment 4 at end of list	mmol/L	01/11/16
Triglycerides (fasting)	Desirable <2.30	Desirable <2.30	mmol/L	09/04/96-05/07/10
Triglycerides (fasting)	Desirable <1.70	Desirable <1.70	mmol/L	06/07/10-31/10/16
Triglycerides (fasting) (single test)	≤1.7	≤1.7		01/11/16
Triglycerides (fasting) (lipid profile)	≤1.7	≤1.7	mmol/L	01/11/16
Non-HDL-C	≤4.2	≤4.2	mmol/L	01/11/16
Apolipoprotein A1	≥ 20 yrs: 1.00-1.90 ≥ 50 yrs	20-49 yrs: 1.00-1.90 ≥ 50 yrs: 1.20-2.10	g/L	09/04/96
Apolipoprotein B100	0.8-1.60	0.8-1.60	g/L	09/04/96-14/10/14
Apolipoprotein B100	<1.20	<1.20	g/L	15/10/15
Occult blood	negative	negative		09/04/96
Lead	≤0.5 * critical >2.5	≤0.5 * critical >2.5	μmol/L	05/04/06-22/10/12
Lead	0-0.49 * critical >2.49	0-0.49 * critical >2.49	μmol/L	23/10/12
POCT pH, arterial	7.35-7.45	7.35-7.45		09/04/96
POCT pCO ₂ , arterial	35-45	35-45		07/01/11
POCT pO ₂ , arterial	85-95	85-95		07/01/11
POCT Hemoglobin	135-175	120-160	g/L	25/10/07
POCT Hematocrit	0.41-0.52	0.36-0.46	L/L	09/04/96
POCT Sodium, whole blood	133-146	133-146	mmol/L	09/04/96
POCT Potassium, whole blood	3.3-4.8	3.3-4.8	mmol/L	09/04/96-07/05/19
POCT Potassium, whole blood	3.5 – 5.0	3.5 – 5.0	mmol/L	08/05/19
POCT Chloride, whole blood	96-107	96-107	mmol/L	09/04/96
POCT Lactate, whole blood	0.5-2.2	0.5-2.2	mmol/L	25/10/07
POCT Ionized calcium (pH adjusted), arterial	1.09-1.25	1.09-1.25	mmol/L	09/04/96

1. All total CK results have the following comment appended: Hospital patients, individuals with sedentary lifestyles and smaller muscle mass should have a proportionately lower CK.
2. All Troponin I results > than 1.4 µg/L have the following comment appended: A Troponin level of 1.5 µg/L or greater supports the diagnosis of myocardial infarction in the presence of appropriate clinical signs.
3. As of June 26, 2012, AHS no longer reports a reference interval for Serum/Plasma Folate. Instead, the following comment is appended to all results:
Deficiency is defined by WHO IS 03/178 as <10 nmol/L
4. Reference Intervals no longer reported. For patients 30 years of age or older, the Framingham Risk Score (FRS), modified for family history, is recommended for risk assessment. FRS calculation resources can be found at:
<https://myhealth.alberta.ca/Alberta/Pages/Heart-Disease-Risk-Calculator.aspx>

Name of Test	Reference Intervals (\$ 18 years)		Units	Effective Date
	Males	Females		
Urine creatinine	9.0-18.0	7.0-16.0	mmol/24h	09/04/96-03/09/03
Urine creatinine	9.0-18.0	7.0-16.0	mmol/V	04/09/03
Urine creatinine	9.0-18.0	7.0-16.0	mmol/24h	09/04/96-03/09/03
Urine creatinine	9.0-18.0	7.0-16.0	mmol/V	04/09/03
24 h Urine potassium	25-125	25-125	mmol/24h	09/04/96-03/09/03
24 h Urine potassium	25-125	25-125	mmol/V	04/09/03
Creatinine clearance	1.30-2.30	1.30-2.30	mL/sec/ 1.73m ²	15/04/96
Urine total protein	<0.2	<0.2	g/24h	09/04/96-03/09/03
Urine total protein	<0.2	<0.2	g/V	04/09/03
Urine protein /creatinine ratio	<13	<13	mg/mmol	09/04/96
Urine albumin (excretion rate)	<20	<20	µg/min	15/04/96
Urine albumin /creatinine ratio	<3.34	<3.34	mg/mmol	15/04/96-31/07/02
Urine albumin /creatinine ratio	<2.65	<2.65	mg/mmol	01/08/02-25/03/10
Urine albumin /creatinine ratio	<2.00	<2.80	mg/mmol	26/03/10-11/01/16
Urine albumin /creatinine ratio	<3.00	<3.00	mg/mmol	12/01/16
Urine calcium	2.0-7.5	2.0-7.5	mmol/24h	09/04/96-03/09/03
Urine calcium	2.0-7.5	2.0-7.5	mmol/V	04/09/03
Urine cortisol	<300	<300	nmol/24h	09/04/96-03/09/03
Urine cortisol	<300	<300	nmol/V	04/09/03-22/02/07
Urine cortisol	<230	<230	nmol/V	23/02/07
Calculated GFR (CKD EPI Equation)	>59	>59	mL/min/ 1.73m ²	01/04/13
N-telopeptide	<81	<81	nmol/mmol creatinine	09/04/96
Urine S.G.	1.005-1.030	1.005-1.030		09/04/96
Urine pH	4.5-8.0	4.5-8.0		09/04/96
Urine leukocyte, protein, glucose, ketone, and hemoglobin.	negative	negative		09/04/96

Name of Test	Reference Intervals (\$ 18 years)		Units	Effective Date
	Males	Females		
Urine bilirubin (CCI Site only)	negative	negative		09/04/96-
Urine Nitrites (CCI Site only)	negative	negative		09/04/96
Urine Urobilinogen (CCI Site only)	negative	negative		09/04/96
Urine sediment	occasional RBC, WBC, epithelial cells	occasional RBC, WBC, epithelial cells	/HPF	09/04/96
Urine sediment	occasional hyaline cast, granular cast, coarse granular cast, fine granular cast, fatty cast, mixed cellular cast, waxy cast, and WBC cast	occasional hyaline cast, granular cast, coarse granular cast, fine granular cast, fatty cast, mixed cellular cast, waxy cast, and WBC cast	/LPF	21/03/00-03/04/07
Urine sediment including: hyaline cast, granular cast, coarse granular cast, fine granular cast, fatty cast, mixed cellular cast, waxy cast, and WBC cast	negative	negative	/LPF	04/04/07
NOTE: Cells, casts, crystals, etc. only reported when present.				

Prepared by,



23MAY2019

Val Taylor, MLT, CCRP
Clinical Trials Technologist
Alberta Public Laboratories
Edmonton Zone