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LABORATORY REPORT

Accession KD-2026-0884213
Final report · supersedes all interim copies

FINAL

Patient	**Priya Rajagopal**	Specimen	**Whole blood (EDTA) and serum**
Age / Sex	**38 y / F**	Collected	**03 Aug 2026, 07:45**
Patient ID	**KD-PT-118207**	Received	**03 Aug 2026, 09:12**
Referred by	**Dr. Meera Ashworth (GMC-7741289)**	Reported	**04 Aug 2026, 11:20**

COMPLETE BLOOD COUNT

Automated impedance / flow cytometry

INVESTIGATION	RESULT	UNIT	REFERENCE RANGE	FLAG
Haemoglobin	▸**10.4**	g/dL	12.0 – 15.5	**L**
Total leucocyte count	▸**11 800**	/µL	4 000 – 11 000	**H**
Platelet count	**268**	×10³/µL	150 – 410	Normal
Packed cell volume	▸**32.8**	%	36.0 – 46.0	**L**
Mean corpuscular volume Microcytic indices; see interpretation	▸**74.2**	fL	80.0 – 100.0	**L**
Neutrophils	**72**	%	40 – 75	Normal
Lymphocytes	**21**	%	20 – 45	Normal

PANEL COMMENT

Peripheral smear shows microcytic hypochromic red cells with mild anisocytosis. No abnormal or immature forms seen.

IRON STUDIES

Colorimetric / immunoturbidimetry

INVESTIGATION	RESULT	UNIT	REFERENCE RANGE	FLAG
Serum iron	▸**34**	µg/dL	50 – 170	**L**
Total iron binding capacity	▸**448**	µg/dL	250 – 425	**H**
Transferrin saturation	▸**7.6**	%	15 – 50	**L**
Serum ferritin Critical value telephoned to referring clinician 04 Aug 2026, 10:55	▸**8**	ng/mL	13 – 150	**C**

PANEL COMMENT

Pattern is consistent with depleted iron stores. Ferritin is an acute-phase reactant and may be falsely raised in inflammation.

LIVER FUNCTION

IFCC kinetic, 37 °C

INVESTIGATION	RESULT	UNIT	REFERENCE RANGE	FLAG
Total bilirubin	**0.8**	mg/dL	0.3 – 1.2	Normal
Alanine aminotransferase (ALT)	**26**	U/L	7 – 35	Normal
Aspartate aminotransferase (AST)	**24**	U/L	8 – 33	Normal
Alkaline phosphatase	**▸142**	U/L	35 – 104	**H**
Serum albumin	**4.1**	g/dL	3.5 – 5.0	Normal

THYROID PROFILE

Chemiluminescent immunoassay

INVESTIGATION	RESULT	UNIT	REFERENCE RANGE	FLAG
Thyroid stimulating hormone (TSH)	**▸5.9**	µIU/mL	0.4 – 4.2	**H**
Free thyroxine (FT4)	**1.1**	ng/dL	0.8 – 1.8	Normal
Free tri-iodothyronine (FT3)	**3.0**	pg/mL	2.3 – 4.2	Normal

PANEL COMMENT

Sub-clinical hypothyroid pattern. Repeat TSH with anti-TPO antibodies after 6 weeks if clinically indicated.

INTERPRETATION

The haemogram together with the iron studies indicates iron-deficiency anaemia of moderate severity, with a markedly reduced ferritin reported as a critical value. The mildly raised alkaline phosphatase is isolated and unlikely to be significant in the absence of transaminase elevation. The raised TSH with normal free hormones suggests sub-clinical hypothyroidism, which may itself contribute to fatigue. Correlation with menstrual history, dietary intake and gastrointestinal symptoms is advised, and a repeat haemogram is suggested after eight weeks of therapy.

Flags. H = above reference range, L = below reference range, C = critical value telephoned to the referring clinician. Flagged rows are set in bold and marked with ▸. Reference ranges are method- and age-specific; correlate all results clinically. Analyses performed on a Cobas c503 autoanalyser and Sysmex XN-1000 haematology line.

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Verified electronically
04 Aug 2026, 11:20
Signature not required on electronic copy

Results relate only to the specimen received and are not valid for medico-legal purposes unless countersigned. Laboratory results should always be interpreted alongside clinical findings. Retest is offered free of charge within 7 days where a technical error is suspected.

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