

hCG (tumour marker)

Synonyms

Human Chorionic Gonadotrophin (HCG)

Clinical Indication

HCG levels are used to monitor patients with gestational trophoblast tumours (hydatidiform moles and choriocarcinoma) and to diagnose and monitor patients with germ cell tumours (testicular cancer in men and extra-gonadal germ cell tumours).

Prevalence (%) of elevated hCG	
Tumour	(%)
Testicular/placental choriocarcinoma	100
Hydatitiform mole	97
NSGCT	48 - 86
Seminoma	10 - 22
Pancreatic adenocarcinoma	11 - 80
Islet cell carcinoma	22 - 50
Gastric cancer	0-52
Ovarian cancer; epithelial	18-41

Diagnostic aid and for monitoring patients with GTD and (in conjunction with AFP) a diagnostic aid and for monitoring patients with NSGCT of testis, ovary and other sites. **HCG should not be used for monitoring other malignancies.**

Part of Profile / See Also

Request Form

Combined Pathology manual Blood form or ICE request

Availability / Frequency of Analysis

On request if specific criteria met.

Turnaround Time

4 days

Patient Preparation

None required.

Sample Requirements

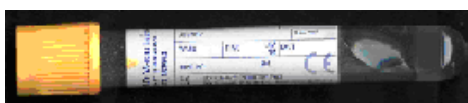
Specimen Type

Serum and plasma

Volume

1 ml

Acceptable Containers



Yellow top (SST) tube



Green top (lithium-heparin) tube



paediatric orange top (lithium-heparin)



paediatric green top (lithium-heparin)

Plain serum samples may also be used.

Reference Range & Units

< 5 U/mL

Reference: Beckman method insert

Interferences

Trophoblastic tumours secrete nicked hCG in addition to normal hCG, which is not recognised by all hCG assays.

Erroneous findings may be obtained from samples taken from patients who have been treated with monoclonal mouse antibodies or have received them for diagnostic purposes. This can also occur in patients who are routinely exposed to animals or animal serum products, and who develop heterophilic antibodies.

Interpretation & Clinical
Decision Value (if applicable)

There are very few benign conditions associated with elevated HCG levels e.g. pituitary adenoma. HCG levels are elevated in pregnancy.

Half Life in Serum: Approx. 16 - 24 hours, decline may be biphasic with a second half-life of 12.8 days.

References

Association for Clinical Biochemistry and Laboratory Medicine Analyte Monographs <http://www.acb.org.uk/whatwedo/science/amalc.aspx>

Test code

HCG

Lab Handling

Analysed from primary tube and stored at 4°C.
 Serum and plasma stable for 7 days at 4-8°C.