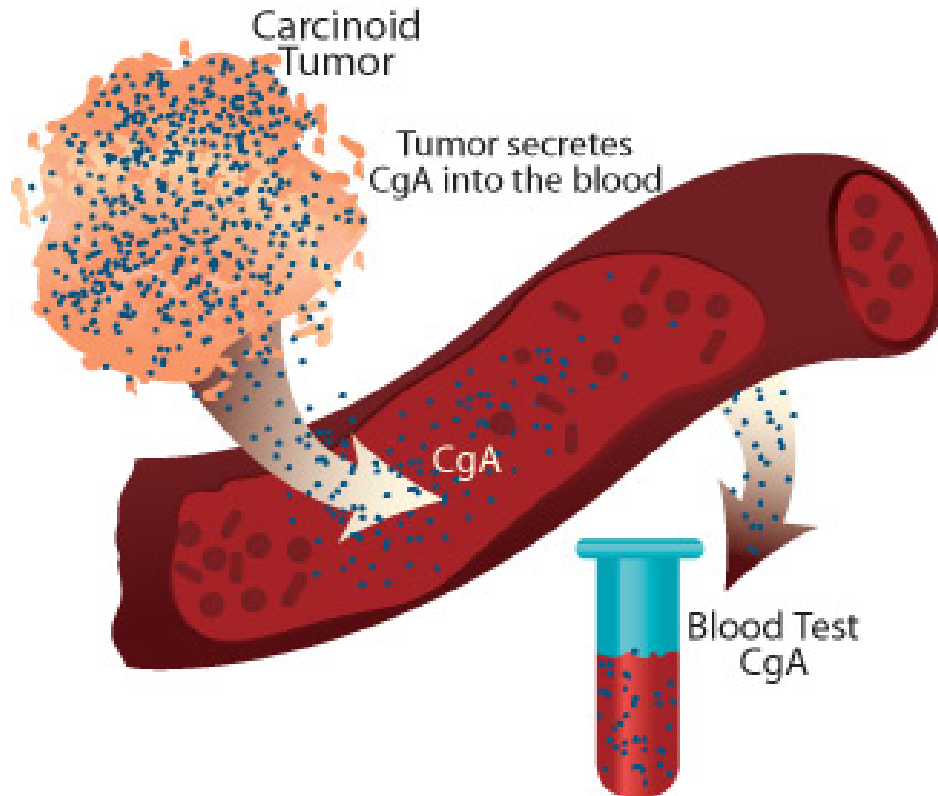


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Chromogranin A Testing by ELISA



Chromogranin A, the protein that is co-stored and co-released with catecholamines from the adrenal medulla, has recently been identified in a variety of human endocrine tissues, both normal and neoplastic. It has been found that the secretion of chromogranin A by peptide hormone-producing human tumors in patients with the following neoplastic disorders: pheochromocytoma, parathyroid adenoma, primary parathyroid hyperplasia, medullary thyroid carcinoma, thyroidal C-cell hyperplasia, carcinoid tumor, oat-cell lung carcinoma, pancreatic islet-cell tumor, and aortic-body tumor is elevated.

Recent studies have shown that the measurement of plasma chromogranin A may be a useful diagnostic procedure in subjects with endocrine tumors, especially multiple endocrine neoplasia.

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Chromogranin A is a 49 kDa acidic protein that consists of 439 amino acids encoded on chromosome 14. Chromogranin A has been identified in a number of normal and neoplastic endocrine tissues. It was demonstrated that an elevated circulating chromogranin A level would be a marker of tumors of neuroendocrine origin. However, the traditional application of chromogranin A is related to pheochromocytoma. The following is a short summary of the uses of chromogranin A, according to published literature:

- 1. A very sensitive (83%) and highly specific (96%) marker in the evaluation of actual or suspected pheochromocytoma. Drugs commonly employed in the diagnosis or treatment of pheochromocytoma have little effect on the plasma chromogranin A level, which is a great advantage toward measuring chromogranin A over catecholamine.**
- 2. To ascertain the source of a tumor. A high chromogranin A level indicates that the tumor arises from neuroendocrine tissues.**
- 3. Detecting endocrine tumors that do not produce their specific hormones, for example, calcitonin negative but chromogranin A positive C-cell carcinoma; zero-cell carcinoma; beta-cell carcinoma; parathyroid carcinoma.**
- 4. Detecting gastro-intestinal tumor.**
- 5. Evaluating prostate cancer. A higher level of Chromogranin A indicates a higher neuron/endocrine activity of the prostate cancer and an ineffective treatment.**
- 6. To ascertain prognostic value in patients with myocardial infarction.**

References :

- 1)Detailed Guide: Gastrointestinal Carcinoid Tumors <http://www.cancer.org>
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- (3)Carcinoid tumors screens and diagnostics <http://www.mayoclinic.com>
- (4)The importance of the measurement of circulating markers in patients with neuroendocrine tumours of the pancreas and gut J E S Ardill and B Eriksson¹
- (5)The Chromogranin–Secretogranin Family Laurent Taupenot, Ph.D., Kimberly L. Harper, M.D., and Daniel T. O'Connor, M.D.