

## C2

### **Neurokinin A is a Sensitive Circulating Biomarker for Neuroendocrine Tumours of the Midgut. Audit of 1000 Consecutive Raised NKA Results in a Routine Regulatory Peptide Laboratory**

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**Background:** Chromogranin A (CgA) is the only general circulating biomarker for neuroendocrine tumours (NETs). The breakdown product of serotonin, urinary 5 hydroxy indole acetic acid (5HIAA) is used to confirm tumours of the midgut (MGC) Serotonin and therefore 5HIAA are frequently raised in lung NETs. Dietary precautions are required for measurement of serotonin and 5HIAA. We use circulating Neurokinin A as a diagnostic tool for MGC.

**Methods:** One thousand consecutive specimens with raised NKA, from patients were audited. Where CgA had also been measured, results were recorded and where urinary 5HIAA had been measured within 4 weeks of the NKA specimen 5HIAA results were recorded. Diagnosis of NET confirmed by tissue pathology was recorded. All NKA results reported above the reference range (RR) request repeat testing or referral to NET clinic.

**Results:** Of the 1,000 specimens, 743 were from patients with confirmed MGC, these corresponded to 124 individuals.

NKA (RR 0-20ng/l)	>100	50-99	40-49	30-39	25-29	21-24	Totals
Totals	218	171	75	152	151	233	1000
MGC	218	163	68	107	98	99	753
Other NETs	0	1	2	8	16	20	47
Diagnosis unconfirmed	0	7	5	37	36	112	200

Of the 200 specimens where diagnosis was unconfirmed, 3 had renal failure, 28 patients had repeat NKA testing falling within the RR and 74 were tested for urinary 5HIAA and were within RR. Remaining specimens related to 45 individuals 6 with NKA >30ng/l. CgA was available for 932 specimens. From NET patients, 29 had CgA within the RR. Urinary 5HIAA was tested in 316 specimens, 38 of these from patients with MGC were within the RR.

**Conclusions:** NKA is an excellent diagnostic tool for MGC, repeat testing for specimens recording <30ng/l is advised.

Patients with advanced pancreatic NETs may test positive when their tumour is multi-hormone secreting.