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Neurokinin A Levels Predict Survival in Patients with Well Differentiated Small Bowel Neuroendocrine Tumors

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Background: Recent European investigations demonstrated that persistently elevated (> 50 pg/ml) plasma neurokinin A (NKA) levels are associated with a poor short term survival in patients with midgut neuroendocrine tumors (NETS). We hypothesized that US patients with persistently elevated NKA levels (> 50 pg/ml) will also have a poor short term survival.

Methods: Serial plasma NKA levels were collected from the charts of 183 patients with midgut NETS. Patients were grouped according to their NKA values, and median, six, twelve, and eighteen month survival rates were calculated. Group one had NKA levels < 50pg/ml. Group two at one point had NKA levels >50 pg/ml but subsequently fell to < 50pg/ml. Group three had NKA values currently >50pg/ml.

Results: Group one patients (n=145) have not yet reached their median survival and their eighteen month survival rate is 95%. Thirteen of the fourteen (93%) group two patients are currently alive. Group three patients (n=24) have a median survival of 20 months and an eighteen month survival rate of 57%.

Conclusion: Patients with midgut NETS who have serial NKA levels <50 pg/ml have an excellent short term prognosis, while patients with NKA levels>50 pg/ml have a poor short term prognosis.