

# Long-Term Efficacy, Survival and Safety of [177Lu-DOTA0,Tyr3] Octreotate in Patients with Gastroenteropancreatic and Bronchial Neuroendocrine Tumors

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**Background:** Bronchial and gastroenteropancreatic neuroendocrine tumors are slow-growing tumors, which often present the somatostatin receptor on the cell membrane. This receptor is a target for therapy with radiolabeled somatostatin analogues. We have treated a large group of patients and present the results of efficacy, survival and toxicity.

**Methods:** Patients were included for analysis of efficacy and survival if treated with a cumulative dose of at least 600 mCi (22.2 GBq) [177Lu-DOTA0,Tyr3]octreotate. For safety analysis 610 patients with a cumulative dose of at least 100 mCi (3.7 GBq) were included. For efficacy analysis 522 patients were included.

**Results:** The objective response rate in the total group of patients was 34%. Stable disease was observed in 37% of patients, resulting in a disease control in 71% of all patients. Overall survival (OS) and progression free survival (PFS) were 63 months (95% CI 57-75 months) and 23 months (95% CI 20-25 months) respectively. Long-term toxicity included acute leukemia in 4 patients (<1%) and myelodysplastic syndrome in 9 patients (1.5%).

**Conclusion:** Peptide receptor radionuclide therapy with [177Lu-DOTA0,Tyr3]octreotate is a therapeutic option for bronchial and gastroenteropancreatic neuroendocrine tumors with good response rates and few side-effects. Compared to other therapeutic options for neuroendocrine tumors this therapy is safe and both OS and PFS are favorable for PRRT.