A retrospective analysis of 90-day outcomes of patients undergoing endoscopic pituitary adenomectomy from 2010 to 2019 by a neurosurgical/ENT team was performed. Tumor subtype, cavernous sinus invasion, extent of resection/early remission, endocrinology outcomes, complications, re-operations and readmissions were analyzed. A comparator cohort ≥ 65 years undergoing clinical surveillance without surgery was also analyzed.

Of 468 patients operated on for pituitary neuroendocrine tumor, 123 (26%) were ≥ 65 years (range 65-93 years); 106 (86.2%) had endocrine-inactive adenomas; 18 (14.6%) had prior surgery. Of 106 patients with endocrine-inactive adenomas, GTR was achieved in 70/106 (66%). Of 17 patients with endocrine-active adenomas, early biochemical remission was: Cushing's 6/8; acromegaly 1/4; prolactinomas 1/5. Gland function recovery occurred in 28/58 (48.3%) patients with various degrees of preoperative hypopituitarism. New anterior hypopituitarism occurred in 3/110 (2.4%) patients; permanent DI in none. Major complications in 123 patients were: Cerebrospinal fluid fistula 2 (1.6%), meningitis 1 (0.8%), vision decline 1 (0.8%). There were no vascular injuries, operative hematomas, anosmia, deaths, MIs, or thromboembolic events. Median length of stay was 2 days. Readmissions occurred in 14/123 (11.3%) patients, 57% for delayed hyponatremia. Intra-cohort analysis by age (65-69, 70-74, 75-79, ≥ 80 years) revealed no outcome differences. Cavernous sinus invasion (OR 7.7, CI 1.37-44.8; p = 0.02) and redo-surgery (OR 8.5, CI 1.7-42.8; p = 0.009) were negative predictors for GTR/NTR. Of 105 patients evaluated for presumed pituitary neuroendocrine tumor beginning in 2015, 72 (69%) underwent surgery, 8 (7%) had prolactinomas treated with cabergoline and 25 (24%) continue clinical surveillance without surgery, including two on new hormone replacement.

This study suggests that elderly patients carefully selected for endoscopic adenoma removal can have excellent short-term outcomes including high resection rates, low complication rates and short length of stay. The experience supports a multidisciplinary approach and the concept of pituitary centers of excellence. Based on observations, approximately 25% of elderly patients with pituitary neuroendocrine tumors referred for possible surgery can be monitored closely without surgery [1].

1)
Thakur JD, Corlin A, Mallari RJ, et al. pituitary neuroendocrine tumors in older adults (≥ 65 years): 90-day outcomes and readmissions: a 10-year endoscopic endonasal surgical experience [published online ahead of print, 2020 Sep 16]. Pituitary. 2020;10.1007/s11102-020-01081-9. doi:10.1007/s11102-020-01081-9