



Current National Practice Patterns in the Management of Nonfunctional Pancreatic Neuroendocrine Tumors



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BACKGROUND

- **Incidence of pancreatic neuroendocrine tumors (PNETs) are rising** due to increased use of computed tomography, and a significant majority of (PNETs) tend to be **non-functioning**.
- The North American Neuroendocrine Tumor Society and National Comprehensive Cancer Network guidelines recommend surgical resection for functional PNETs but **state that surveillance is sufficient** for patients with T1 non-functional PNETs <2cm.
- Given the recent change in guidelines, it remains unclear what current national treatment practices are.

RESEARCH OBJECTIVES

To investigate and assess national trends and predictors of surgical resection for eligible PNETs suitable for observation.

METHODS

Patients ≥ 18 years of age were evaluated from the National Cancer Database (NCDB) who were diagnosed with clinical T1, nonmetastatic, low grade, primary, nonfunctional PNETs from 2004-2020

Exclusion Criteria:

- Functional PNETs
- Patients with metastatic disease

Primary Outcomes: Surgical resection

Secondary Outcomes: Predictors of surgical resection

Multivariable logistic regression models identified independent risk factors for receiving surgery.

Univariate logistic regression identified predictors of receiving surgery.

CONCLUSION

Management of T1 non-functional PNETS leans heavily toward surgical resection when compared to observation.

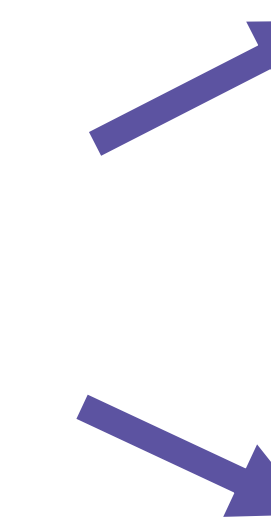
Younger age and location of tumor in the body or tail of the pancreas were the only positive predictors of surgery resection.

Continued investigation is warranted to further de-escalation of surgery in T1 tumors.

RESULTS

Figure 1. Study cohort.

6,568 patients with T1 non-functional PNETs <2cm



70.8% underwent surgical resection

29.2% did not have surgical resection

Table 1. Univariate logistic regression identifying predictors of receiving surgery.

Predictors	Odds Ratio	P-Value	95% CI
Age	0.5443722	0	0.47-0.63
Female Sex	1.116476	0.258	0.92-1.35
Race			
Black	1.188213	0.323	0.84-1.67
Hispanic	1.078664	0.737	0.69-1.68
Asian	1.771002	0.068	0.96-3.27
Other	1.055932	0.846	0.60-1.83
Insurance			
Uninsured	0.5475476	0.178	0.23-1.31
Medicaid	0.8432732	0.465	0.53-1.33
Medicare	0.8912865	0.343	0.7-1.33
Other Government	0.5626911	0.112	0.27-1.14
Income			
<\$46,227	1.078019	0.65	0.78-1.49
\$46,227-\$57,856	1.045123	0.754	0.79-1.37
\$57,856-\$74,062	1.046509	0.716	0.82-1.33
Primary tumor site			
Head	1.043306	0.75	0.80-1.35
Tail	2.219056	0	1.72-2.85
Islands of Langerhans	20.42318	0.003	2.72-153
Neck	0.7500882	0.236	0.46-1.21
Overlapping	1.437925	0.161	0.87-2.39
Not Specified	0.7257102	0.123	0.48-1.09