

Transsphenoidal surgery is the preferred first-line therapy for most [pituitary neuroendocrine tumor](#) (PA), and the conventional strategy of treatment is [intracapsular resection](#)(IR). The protocol of [extracapsular resection](#)(ER), which considers the pseudocapsule as the PA boundary for surgical removal, has also been introduced.

A systematic literature review was performed in the PubMed, EMBASE, Web of Science and Cochrane databases. Articles comparing IR and ER were included.

There were 7 studies containing 1768 cases in accordance with the inclusion criteria. Although the meta-analysis showed no significant difference in complete resection, a sensitivity analysis revealed that ER was more conducive to total PA resection than IR. Moreover, we found a significant difference in favor of ER regarding biochemical remission. Furthermore, there was no significant difference in the incidence rate of certain complications, such as hormone deficiency, diabetes insipidus, intraoperative cerebrospinal fluid(CSF), and postoperative Cerebrospinal fluid fistula. However, sensitivity analysis suggested that IR decreased the risk of intraoperative Cerebrospinal fluid fistula.

This [meta-analysis](#) unveiled that ER contributed to biochemical remission. To some extent, our results also showed that ER played a positive role in complete resection, but that IR reduced the incidence of intraoperative Cerebrospinal fluid fistula. However, the available evidence needs to be further authenticated using well-designed prospective, multicenter, randomized controlled clinical trials ¹⁾

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Zhang X, Wang YG, Tan J, Zhao G, Ma M, Chen J, Huang N. Comparison of [outcomes](#) between [intracapsular resection](#) and pseudocapsule-based [extracapsular resection](#) for [pituitary neuroendocrine tumor](#): a systematic review and meta-analysis. BMC Neurol. 2022 Feb 12;22(1):52. doi: 10.1186/s12883-022-02574-9. PMID: 35151259; PMCID: PMC8840683.

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