

# Expression of Glucagon-Like Peptide 1 Receptor and its Effects on Biologic Behavior in Pancreatic Neuroendocrine Tumors

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(膵神経内分泌腫瘍におけるグルカゴン様ペプチド 1 受容体の発現と  
その生物学的作用)

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## 論 文 内 容 の 要 旨

Glucagon-like peptide 1 (GLP-1) interacts with its specific high-affinity receptor, glucagon-like peptide 1 receptor (GLP-1R), and induces cellular growth and inhibition of apoptosis in pancreatic  $\beta$ -cells. I aimed to investigate the significance of GLP-1R expression in pancreatic neuroendocrine tumors (PNETs).

GLP-1R expression was semi-quantitatively evaluated by immunohistochemical staining in 50 resected PNETs, and the correlation between the GLP-1R expression and clinicopathological features was investigated. There were 23 PNETs with positive and 27 with negative expression of GLP-1R. Positive expression of GLP-1R was more frequently observed in insulinoma than in gastrinoma and non-functioning tumor ( $p<0.05$ ). Although expression status of GLP-1R did not affect the prognosis of the patients with PNETs ( $p=0.82$ ), most of the metastatic sites such as lymph node and liver showed positive staining for GLP-1R (8/11, 73%).

I conclude that GLP-1R would be a diagnostic marker of insulinoma and might become a molecular target for treatment of metastatic PNETs and hormonal regulation of insulin.