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# Dysregulation of KRAS signaling in pancreatic cancer is not associated with *KRAS* mutations and outcome

**Oliverius M[1], Brynychova V[2], Hughes D J[3], Hlavac V[2], Dvorak P[4], Doherty J E[5], Murray H A[5]** and **Lemstrova R[6]**
[1]Institute of Clinical and Experimental Medicine, Czech
[2]National Institute of Public Health, Czech
[3]Royal College of Surgeons in Ireland, Ireland
[4]Charles University in Prague, Czech
[5]Randox Laboratories Ltd, Crumlin, UK
[6]Palacky University Olomouc and University Hospital Olomouc, Czech

**Background:** Pancreatic ductal adenocarcinoma (PDAC) is known as cancer with very poor prognosis. *KRAS* oncogene is a major driver of PDAC tumorigenesis but its role as prognostic or predictive factor is not clear. The aim of the present study was to investigate the prognostic significance of *KRAS* downstream signaling pathway genes expression and association with clinical characteristics in PDAC patients undergoing radical surgery.

**Methods:** Tumors and adjacent non-neoplastic pancreatic tissues were examined in 45 patients with histologically verified PDAC. *KRAS, BRAF* and *PIK3CA* gene mutation analysis was performed using the *KRAS/BRAF/PIK3CA* array. The transcript profile of 52 *KRAS* downstream signaling pathway genes was assessed using quantitative real-time polymerase chain reaction.

**Results:** *KRAS* mutation was detected in 80% of cases but the mutation status do not influence PDAC patient's prognoses. The genes of four signaling pathways downstream of *KRAS* including the PI3K/PDK1/AKT, RAL guanine nucleotide exchange factor, RIN1/ABL, and RAF/MAPK pathways exhibited differential expression in PDAC compared to the adjacent normal tissue. However, no significant differences in expression were evident between patients with KRAS mutated and wild type tumors. Moreover, expression patterns of *KRAS* downstream signaling pathway do not associate with overall survival of patients.

**Conclusions:** *KRAS* mutation is present in most cases of PDAC, but is not associated with changes in expression of *KRAS* downstream signaling pathways and clinical outcome.

## Biography

Martin Oliverius is Deputy Head of Transplant Surgery Department and Director of small bowel transplantation program at Institute for Clinical and Experimental Medicine, Pargue, Czech Republic.

martin.oliverius@medicon.cz

**Notes:**