

## Independent and Combined Effects of Multiple Risk Factors for Pancreatic Cancer in a Middle East Country.

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**Back ground /Aim:** Pancreatic cancer (PC) is a deadly and globally increasing cancer. The causes of PC are still insufficiently known, however smoking, diabetes mellitus (DM) and obesity have been identified as risk of PC, mostly in the developed countries. We studied risks of PC in Iran.

**Materials and Methods:** Cases and controls were selected consequently from patients who were referred to a tertiary referral hospital in Tehran, Iran, from Jan. 2012 to Jan. 2018. Information on risk factors was collected by a personal interview. Logistic regression models was used to calculate odds ratios (ORs) and 95% confidence intervals (CIs).

**Results:** we recruited 470 newly histopathological diagnosed pancreatic adenocarcinoma and 526 matched (age and gender) controls .After adjustment for potential confounders, cigarette smoking [OR; 1.65 (1.15-2.38)], opium use [OR; 1.58(1.06 -2.35)], history of DM >2 years [OR 1.99 (1.31-3.02)], and having family history of any kind of cancer in a first -degree relatives [OR; 1.53 (1.14-2.05)] were associated with an increased risk of PC. We did not find an association between obesity [OR; 0.99(0.71-1.38)] and PC. A synergistic interaction between DM and family history of a cancer was found [OR; 2.78 (1.35-5.72)]. Approximately 4.6 %, 5.9%, 8.2 %, and 10.9 % of PC were related to cigarette smoking, opium use, DM and family history of a cancer, respectively.

**Conclusion:** This study supports that smoking, opium use, DM and family history are associated with PC risk, however same as many studies from the Asian countries, obesity is not associated with PC in our population. There is a critical need to pinpoint modifiable risk factors of PC in different countries to help policy makers for implanting relevant strategies to reducing risks of PC.