

## Risk Factors and Epidemiologic Features of Pancreatic Cancer in Iran.

Akram Pourshams MD, MPH

Digestive Diseases Research Institute, Tehran University of Medical Sciences, Tehran, Iran

**Background;** Pancreatic cancer (PC) has the lowest survival rate of all cancers worldwide. PC is more common in affluent nations, but it is on the rise in developing countries. Although increasing in PC incidence is largely because aging, it is necessary to know its risks, to be able to control PC in developing countries.

**Method;** in a prospective study , cases (new incident pathology confirmed pancreatic adenocarcinoma) and controls ( patients with GI motility disorders, but no any pancreatic disease or any cancer ) were selected from who were referred to Shariati Hospital in Tehran, Iran from January 2011 to January 2018. A validated structured questionnaire was used to interview 462 PC cases and 476 matched controls (age and sex) before to made final diagnosis for the cases and controls. All cases and controls were under active follow up.

**Results;** the median ( $\pm$ SD) age at time of PC diagnosis was  $65\pm 11$  years and 60.8% were male with a male-to-female ratio of 3:1. After adjustment for potential confounders, opium use (OR= 1.97, 95% CI 1.09–3.28) and alcohol consumption (OR =3.88, 95% CI 1.89–8.63) were significantly associated with an increased risk of PC. No association was found between ever tobacco smoking and PC risk (OR= 0.91, 95% CI 0.60 –1.43).Increasing consumption of barbecuing red meat and deep fried vegetables was associated with 67 % and 70 % increased risk of PC (p-value 0.025 and 0.006, respectively). In contrary to increasing frequency of fish consumption was associated with a lower risk of PC (OR=0.93, 95 % CI 0.59–1.47; p for trend 0.009). Strong association was found between PC and obesity (OR= 3.52, 95% CI 2.20 - 6.48) as well as long term diabetes mellitus (OR= 2.01, 95% CI 1.26 - 3.31).High-wealth status were inversely associated with risk of PC. Age at menarche and menopause, number of parity, gravidity, and abortion were not associated with PC risk in women. Median overall survival was 6.3 months. Only 5.3% of cases underwent a curative surgery. Cases who were married (6.4 vs 5.8 months; log-rank P = .01), had university education (10.4 vs 5.9 months; log-rank P = .004) and were urban residents (6.5 vs 5.3 months; log-rank P = .03) had longer survival. Patients with a tumor >4 Cm, stage  $\geq$ III and those who consumed opium had the worst prognosis. Chemotherapy alone did not increase the patient's longevity.

**Conclusions;** Obesity, diabetes mellitus, low socio-economic status, opium use and alcohol consumption, but no cigarette smoking, were associated with an increased risk of PC in our population.