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Summary

Association between pancreatic adenocarcinoma and organochlorine pesticides

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Podcast Episode

October 31, 2024

A French case-control study found associations between higher levels of certain banned organochlorine pesticides in adipose tissue and increased risk of pancreatic adenocarcinoma, though the cohort was small and the level of evidence remains low.

KEY POINTS

- The study screened more than 300 pesticides and metabolites in adipose tissue and urine samples from pancreatic adenocarcinoma cases and matched benign-pathology controls using gas and liquid chromatography spectrometry.
- Higher odds ratios for pancreatic adenocarcinoma were found in patients with elevated adipose tissue levels of Mirex and another organochlorine, both of which have been banned since the 1990s but were still detectable in patient samples.
- Organochlorine levels in adipose tissue did not influence survival in this cohort, and the authors acknowledged the study's small size and low level of evidence.
- The authors excluded patients with genetic predispositions or IPMN to focus on a distinct oncologic pathway and hypothesise that pesticides may be under-recognised risk factors contributing to rising pancreatic cancer incidence, particularly early-onset cases.
- Future work will explore microplastics and other environmental exposures in gastrointestinal cancers, with the aim of building larger cohorts to disentangle risk factors.

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