



## 25 - DIABETES-RELATED DIETARY PATTERNS AND ENDOMETRIAL CANCER RISK AND SURVIVAL IN THE EPIC STUDY

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### Resumen

**Background/Objectives:** Endometrial cancer (EC) major risk factors include obesity and diabetes, both strongly related with lifestyle choices and dietary factors. Our study aimed to evaluate the relationship between diabetes related dietary patterns (DP) and EC risk and survival in a population of middle-aged European women.

**Methods:** A total of 285,418 female participants from the European Prospective Investigation into Cancer and Nutrition (EPIC) study were included in the present analysis. (1) 1,955 incident EC cases were registered, of those 380 women died, including 133 from EC. The Empirical Dietary Index for Hyperinsulinemia EDIH, (2) the Empirical Dietary Index for Insulin Resistance EDIR, (2) and the Diabetes Risk Reduction Diet DRRD, (3) were estimated from dietary information collected at baseline from EPIC participants. (1) Cox proportional hazards regression models were used to evaluate the association between the diabetes-related DP and EC risk, using hazard ratios (HR) and 95% confidence intervals (CI), and adjusting for relevant confounders. Cox and Fine-Gray models were used to assess the association of DP with overall and EC-specific mortality respectively.

**Results:** The mean BMI was 24.68 Kg/m<sup>2</sup> (SD 4.3), EC cases had a higher BMI 26.85 Kg/m<sup>2</sup> (SD 5.3). Higher adherence to EDIR and EDIH was associated with an increased risk of EC. Multivariable HR for the highest versus lowest tertile of adherence were 1.19 (95%CI = 1.06-1.34) for EDIR and 1.14 (95%CI = 1.01-1.27) for EDIH. However, when BMI was included in the models, these associations became weaker and no longer statistically significant for both EDIR 1.11 (95%CI = 0.99-1.25) and EDIH 1.07 (95%CI = 0.95-1.20). No associations were observed between EC risk and adherence to DRRD. Higher associations between adherence to EDIR and EC risk were observed among women with overweight and obesity HR 1.16 (95%CI = 1.00-1.35) as for the group of physically inactive women HR 1.24 (95%CI = 1.07-1.44). No relevant differences were observed among subgroups for the other DP. No associations were found in relation to the three DP and survival.

**Conclusions/Recommendations:** This study highlights the potential role of etiology-derived DP in disease prevention. The link between diets that promote hyperinsulinemia, insulin resistance and the increased risk of developing EC is mediated by BMI. Overweight, obese, and physically inactive women appear to be at a higher risk when adhering to dietary patterns such as EDIR.