

PREGNANCY-ASSOCIATED CANCER IN SCOTLAND (1981-2023): A POPULATION-BASED COHORT STUDY

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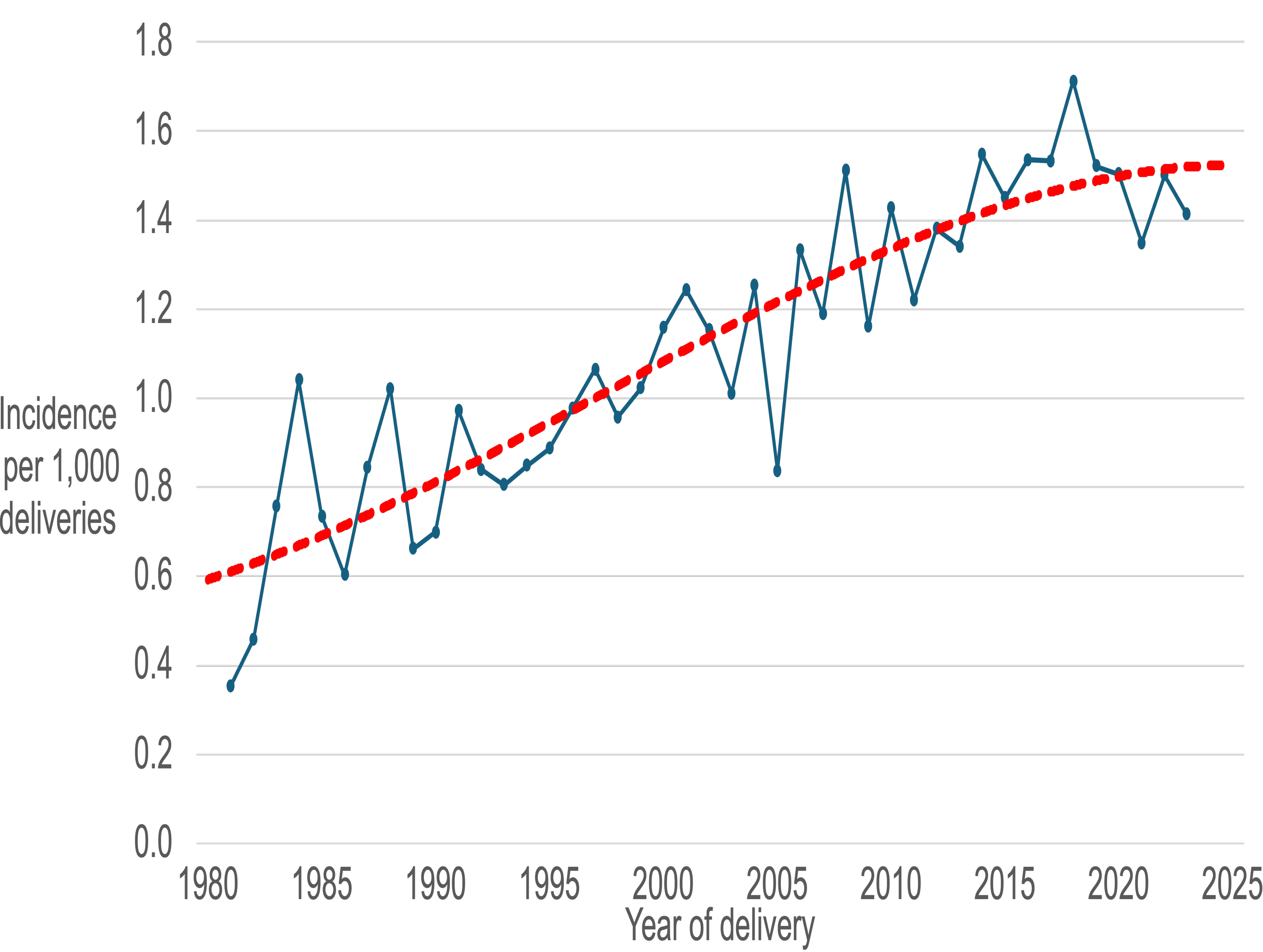
BACKGROUND

- Pregnancy Associated Cancer (PAC) is cancer diagnosed from conception to 1 year post-delivery
- PAC incidence is increasing, but reasons for this are poorly understood

We aimed to:

- explore trends in PAC over time and by cancer type
- define risk factors for PAC

Figure 1: PAC incidence over time (Scotland, 1981-2023)

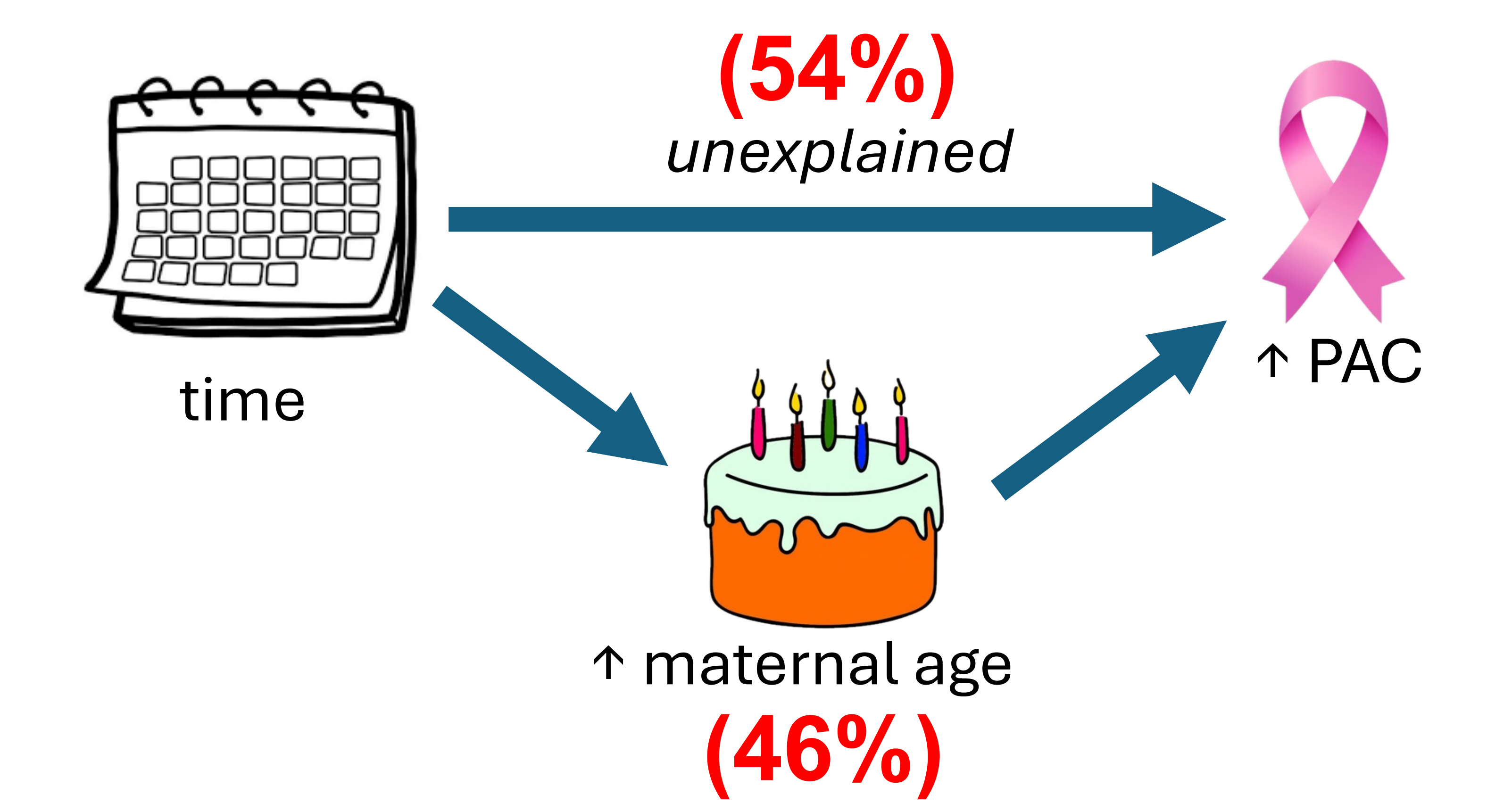


METHODS

P: All deliveries from 1981-2023 in Scotland resulting in a livebirth
E: women with PAC
C: women without PAC
O: Crude incidence rate, risk factors

Statistics:
Univariable regression for risk factors.
Multivariable regression for risk factors with $p < 0.1$
Mediation analysis (proportion of risk factors driving the increasing PAC incidence)

Figure 2: Mediation analysis



RESULTS

- 2,174,222 deliveries** (2372 cases of PAC)
 - 228 (25.6%) antepartum, 661 (74.4%) postpartum PAC
 - Most prevalent cancers: breast, melanoma, cervical
- Crude incidence (*Figure 1*): **1.09 per 1,000 deliveries**
 - 1981: 0.35 per 1,000 deliveries
 - 2023: 1.41 per 1,000 deliveries
 - Annual percentage increase: **2.9%** (95% CI: 1.5 – 4.3%)
- Risk factors for PAC:
 - Univariable modelling: maternal age, least deprived SIMD, non-smoker, black ethnicity, nulliparity, BMI
 - Multivariable modelling: **maternal age only**
 - Mediation analysis (*Figure 2*): **43%** of increasing PAC mediated by increasing maternal age.

CONCLUSIONS

- Pregnancy Associated Cancer:
 - Incidence 1.09 per 1,000 deliveries per year
 - Incidence increasing by 2.2% per year over 42 years
 - Maternal age identified as a risk factor
 - Increasing PAC incidence partially (43%) mediated by increasing maternal age