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Determinants of GP's cancer related gut feelings
a prospective cohort study

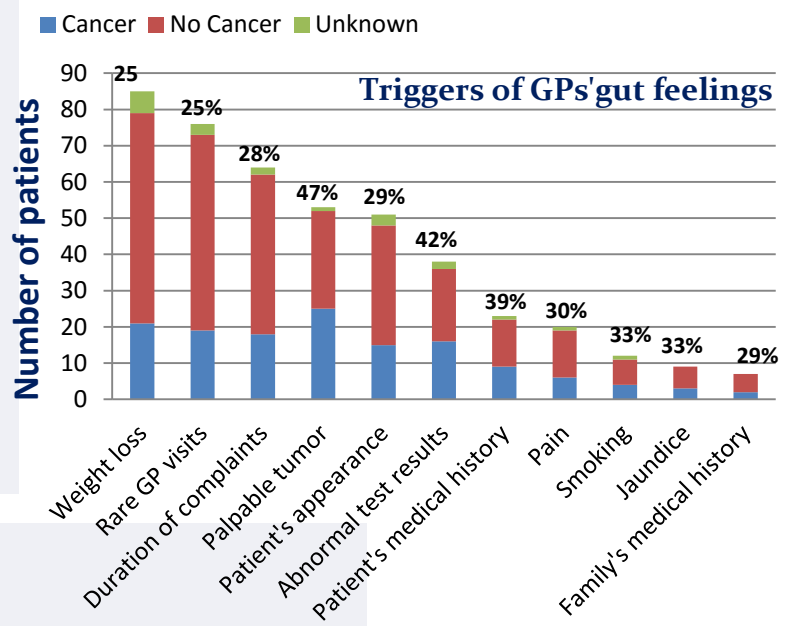### Gé A. Donker, Eva Wiersma, Marianne Heins

Study aim

- Explore triggers and GP's action based on cancer related gut feelings
- Determine the predictive value of gut feelings and how this is influenced by patient and GP characteristics

Research method

- Prospective cohort study
- 44 general practices
- throughout The Netherlands
- January 2010 - December 2013
- GPs completed a questionnaire regarding gut feelings, patient and GP characteristics, if they noticed a cancer-related gut feeling during patient consultation
- **Follow-up questionnaires** were sent **3 months later** requesting information about the patient's diagnosis.
- Univariate, multivariate logistic regression and multilevel analyses were performed

Variables	Odds Ratio (95% Confidence interval)	Z - value	P - value
Age Patient	1.02 (1.01 – 1.04)	Z = 2.50	P = 0.01
Age GP	1.03 (1.00 – 1.06)	Z = 2.02	P = 0.04
Palpable tumor	1.90 (0.97 – 3.74)	Z = 1.86	P = 0.06
Weight loss	0.58 (0.31 – 1.09)	Z = -1.70	P = 0.09
Rare GP visits	0.58 (0.32 – 1.09)	Z = -1.70	P = 0.09
Constant	0.03 (0.01 – 0.18)	Z = -3.90	P < 0.001

Table: Multivariate logistic regression analysis of the positive predictive value of cancer related gut feelings for a cancer diagnosis 3 months later, with the significant variables from univariate analyses

Triggers of GPs'gut feelings

Results

- A gut feeling (N=366) is most often triggered by weight loss (24%) and rare GP visits (22%)
- Most GPs (95%) acted immediately on the gut feeling, either referring to a specialist or by performing additional medical tests
- Patient's and GP's age were the only predictors of a cancer diagnosis 3 months later in a multivariate analysis
- GP's age and years of experience were highly correlated
- The average positive predictive value of a cancer related gut feeling was 35%
- This increases with 2% for every year a patient and with 3% for each year a GP becomes older

Conclusion
- GP's **gut feeling** is a useful tool in diagnosing cancer

Its predicting value increases
- If the **GP** is older or more experienced and
- When the **patient** is older