

Association of providers' prescribing patterns with postsurgical opioid use among cancer patients undergoing curative-intent surgery

Yuan Xu¹, Colleen A. Cuthbert², Safiya Karim², Shiyong Kong³, Joseph C. Dort^{3,4}, May Lynn Quan^{1, 2, 3}, Ashley V. Hinthner^{3,4}, Winson Y. Cheung²



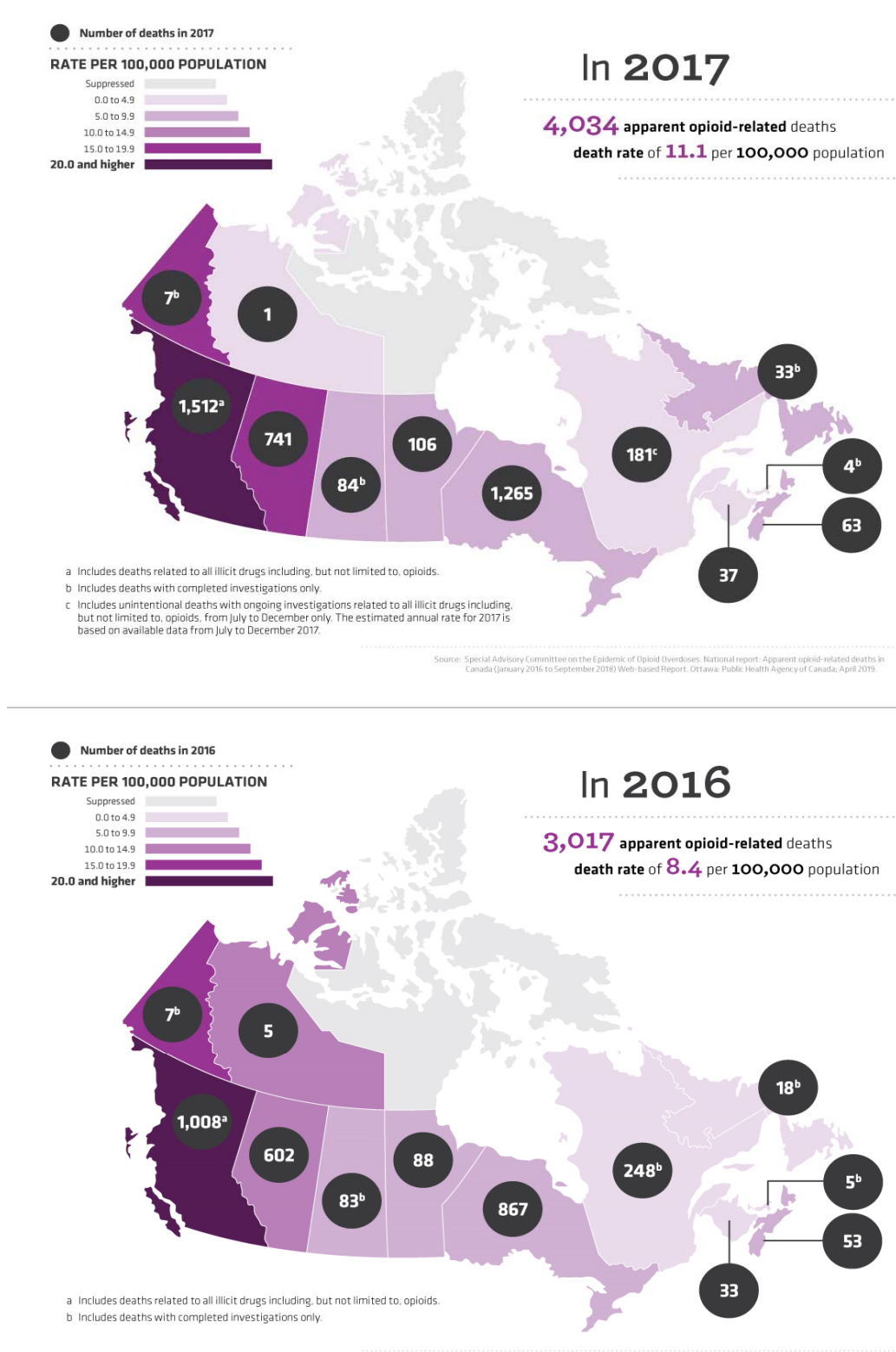
UNIVERSITY OF CALGARY

BACKGROUND

Patients with cancer are vulnerable to chronic opioid use. Although opioid use may be appropriate, preliminary data suggest that a significant proportion may be using opioids inappropriately.

Objective:

To evaluate the association between the history of the providers' opioid-prescribing patterns and post-surgical opioid use in cancer patients undergoing curative-intent surgery.

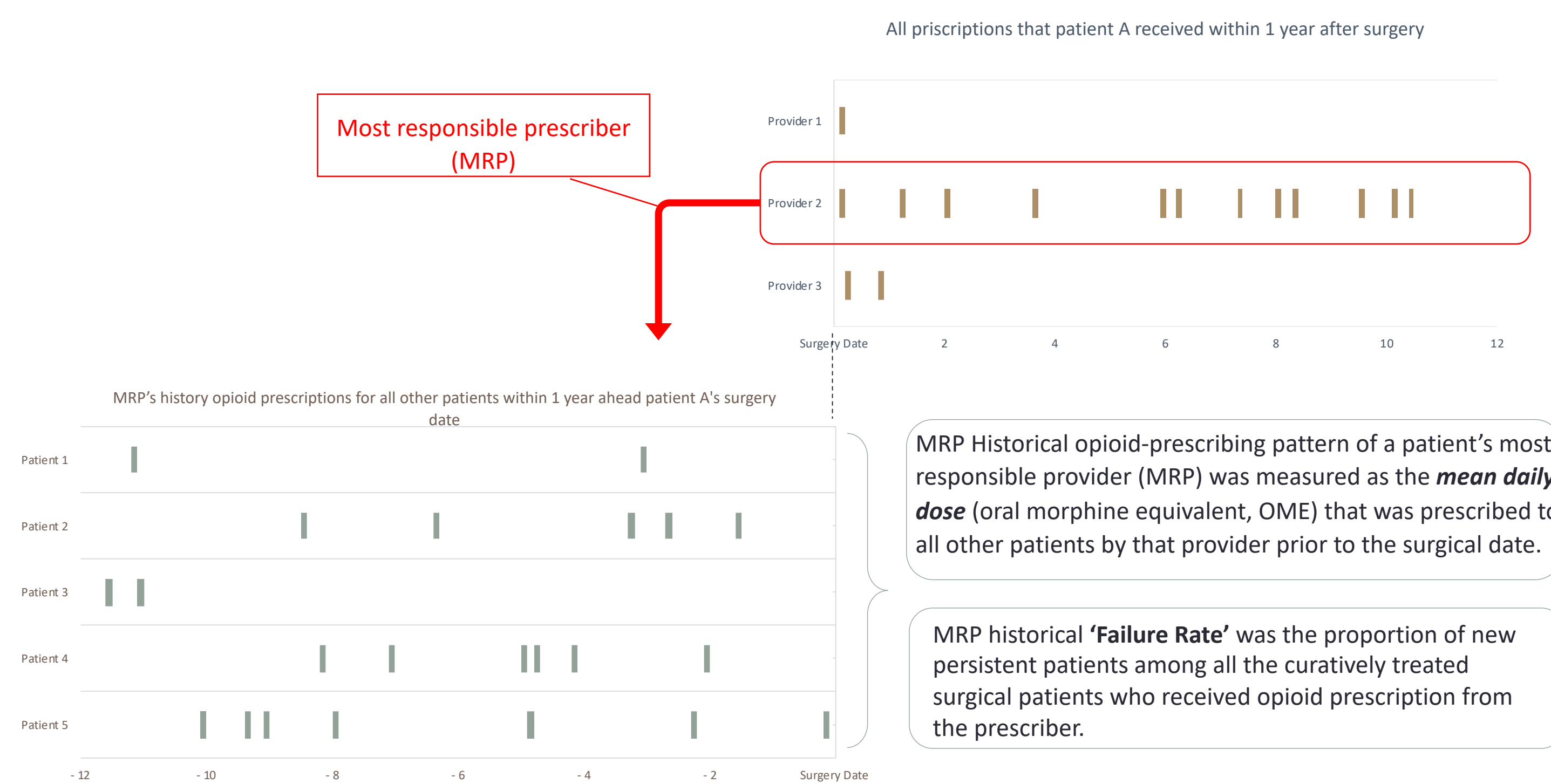


Source: Government of Canada website: <https://infobase.phac-aspc.gc.ca/datalab/national-surveillance-opioid-mortality.html>

METHODS

➤ All patients diagnosed with common solid tumors who received curative-intent surgery and were non-opioid users prior to surgery between 2009 and 2015 in Alberta, Canada.

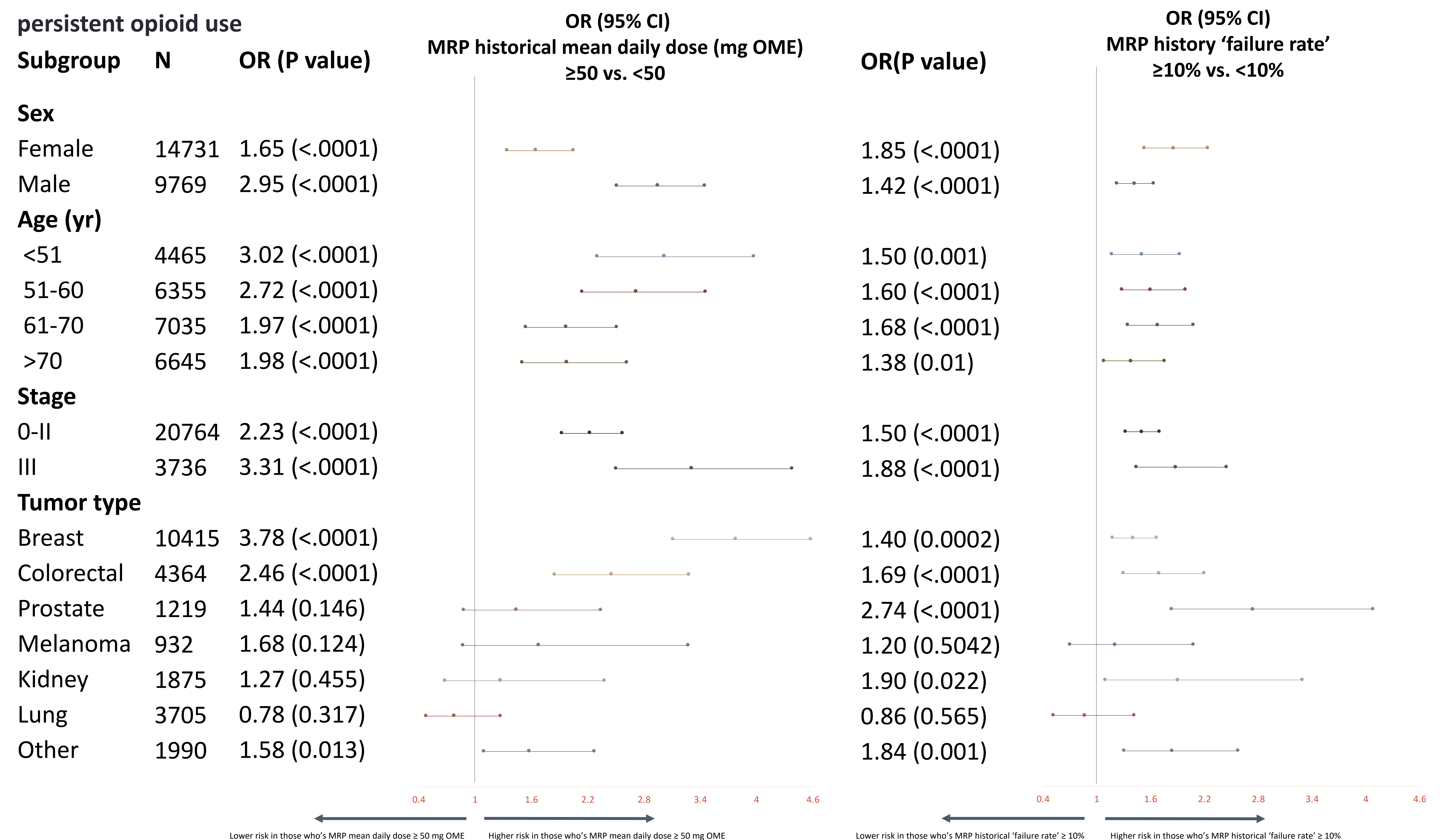
➤ A **new persistent opioid user** was defined as opioid-naïve prior to surgery and who subsequently filled at least one opioid prescription between 60 and 180 days after surgery.



RESULTS

- 14780 patients met the inclusion criteria and were associated with 2880 MRPs, among which 2364 (16%) patients became new persistent opioid users after surgery.
- Patients with MRPs that historically prescribed higher doses of opioids (≥ 50 vs. < 50 mg OME: OR=2.41, $P < 0.0001$) routinely in all patients and had a higher historical 'failure rate' ($\geq 10\%$ vs. $< 10\%$: OR= 1.57, $p < 0.0001$) were associated with a greater risk of new persistent opioid use after surgery.
- Other risk factors included higher Charlson comorbidity index, multiple prescribers, specific tumor types, and chemotherapy.

Figure 1 the odds ratios for the variables 'MRP mean daily dose' and 'MRP failure rate' subgroup analyses modeling new persistent opioid use



CONCLUSION

Prescribers with a history of prescribing higher opioid doses are an important predictor of chronic opioid use among cancer patients undergoing curative-intent surgery. Awareness of physician prescribing practices and their unintended consequences may inform strategies to minimize persistent post-operative opioid used in cancer patients.

Author affiliation

1 Department of Community Health Sciences, Cumming School of Medicine, University of Calgary, Calgary, Alberta, Canada
 2 Department of Oncology, Cumming School of Medicine, University of Calgary, Tom Baker Cancer Centre, Calgary, Alberta, Canada.
 3 Department of Surgery, Cumming School of Medicine, University of Calgary, Calgary, Alberta, Canada.
 4 The Ohlson Research Initiative, Arnie Charbonneau Cancer Institute, University of Calgary, Calgary, Alberta, Canada.
 Contact: yuxu@ucalgary.ca