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Geographic disparities in bladder cancer incidence among women in the department of Bouches-du-Rhône

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While the incidence of bladder cancer begins to decline in men it increases in women related to tobacco smoking. The study aimed to describe bladder cancer among women in the department of Bouches-du-Rhône and assess their spatial distribution in order to detect potential spatial clusters. Cancer incidence data were obtained from the departmental observatory of cancers REVELA13. The characteristics of the cases registered were compared to those describe at the national level. Age-standardized incidence ratios (SIRs) were calculated for each commune and bayesian smoothed risk estimate based on the Besag, York and Mollie model were computed for incidence mapping. The spatial scan statistic (SaTScan) was used to investigate local cluster. Spatial analyses were adjusted on various confounding factors as a French deprivation index, access to health-care services and population density.

During the period 2013-2016, 395 cases of bladder cancers were diagnosed in women. Departmental incidence was significantly higher (3.3 cases per 100,000 inhabitants) than the national incidence (2.3). Compared to men, bladder cancers among women were diagnosed at a more advanced stage of the disease (p < 0.01). SIRs geographical variations were related to access of care but none of the communes showed any significant excess of cases. However, one significant cluster including nine districts of the biggest city (Marseille) and one neighbouring commune (RR = 1.76) was detected in the south east of the department.

Spatial studies of bladder cancer in women rarely find over-incidence or clusters due to lack of power. However, this study has shown that geographical disparities exist in particular because of a lesser access to a specialist. Regarding the high prevalence of smoking among women in the south of France, practitioners need to think about bladder cancer in women with urinary signs.

Key messages:
• We identify for the first time a cluster of bladder cancers in women in France.
• Practitioners need to think about bladder cancers in women with urinary signs because this cancer will become a public health issue in the future.