**Supplementary Figure 1. Probabilistic bias analysis on the association between male military personnel and incidence of motor neuron disease for confounding by smoking**



Probabilistic bias analysis was carried out for the association between male military personnel and MND (RR=1.16; 95% CI=1.05-1.29). We specified prior knowledge on three parameters:

* the association between ever-smoking and MND: either RR=1.42 (■) (Wang et al., 2011) or OR=2.0 (■) (Nelson et al., 2000).
* the prevalence of ever-smoking in men ≥50y from the general population: we used data from the French ESPS health survey (Célant et al., 2017) that included 2,518 CNAMTS male members ≥50y in whom the prevalence of ever-smoking was 64%. We used a uniform distribution between 59% and 69%.
* the prevalence of ever-smoking in men ≥50y from the military population: data from the same survey included 60 CNMSS male members ≥50y in whom the prevalence of ever-smoking was 67%. Because the prevalence of ever smoking in military personnel was based on a small number of subjects and may be imprecise, we considered a larger difference in prevalence of ever-smoking between the two groups by allowing prevalence of ever-smoking to increase in military men from 68% to 88% by 4% steps and using a uniform distribution centered on each ever-smoking prevalence with a range of 5 point.