

## Figure titles and legends

### Figure 1:

Title

Tracking of mammographic density measures over time among controls, by density assessment method on each of the four mammographic density measures.

Legend

The numbers of women in each screening round are given in Supplementary Table 2.

### Figure 2:

Title

Predicted Cumulus (left MLO; solid line) and ImageJ-based (left-right MLO mean; dashed line) mammographic density trajectories from ages 40 to 53 years in control women with different BMI values (but constant for each individual), who experience menopause at age 50 years. From top to bottom row: percent density (PD), dense area (DA) non-dense area (NDA) and breast area (BA).

Legend

Predictions based on mixed effects models fitted on controls (see Supplementary Table 4). Predicted PD, DA, and NDA values were obtained from a model that included age (centered at age 45 years), BMI, menopausal status and, for Cumulus, also reader. Predicted BA values were obtained from a model that included age, BMI, and, for Cumulus, also reader. Predicted values for Cumulus measures are averages of the reader-specific predictions (weighted by the number of readings performed by each one).

### Figure 3.

Title

Odds ratios (ORs) for breast cancer for a sample of four women (lines A to D) with typical predicted Cumulus (left MLO) and ImageJ-based (left-right MLO mean) percent density trajectories relatively to the trajectory of a woman of similar BMI and menopausal status but with mean PD random intercept and slope (solid line).

Legend

The four women were randomly selected among controls with BMI of 22-24.9 kg/m<sup>2</sup> and who were still premenopausal at the end of the follow-up period.