



Title	Association of job category and occupational activity with breast cancer incidence in Japanese female workers : the JACC study
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# 論文内容の要旨

## Synopsis of Thesis

氏 名 Name	GITA NIRMALA SARI
論文題名 Title	Association of job category and occupational activity with breast cancer incidence in Japanese female workers: the JACC study (日本人女性労働者における職種および職業活動と乳がん発生率との関連：JACC研究)
論文内容の要旨	
〔目 的(Purpose)〕	
Breast cancer represented the leading cause of cancer deaths among women in Japan. Scientific evidence is limited on the risk of breast cancer according to job category or occupational activity in Japanese. Our research assesses the associations of job category ( <i>manual, office, professional, and unclassified</i> ) and occupational activity ( <i>moving, mainly standing and mainly sitting</i> ) with the risk of breast cancer incidence among Japanese female workers. We conducted stratified analyses on the basis of physical activity indicated by walking time per day (indoor, work, home and outdoor).	
〔方法ならびに成績(Methods/Results)〕	
Methods: A prospective cohort study involving 19,041 women aged 40–79 years who have reported their occupational data and followed-up (1988 to 2009). All variables were assessed by a self-administered questionnaire and cancer population data registration or hospital records. The Cox proportional hazard models were operated to calculate the hazard ratios (HRs) and corresponding 95% confidence intervals (CIs).	
Results: There were 138 incident cases of breast cancer during 13.3 years median follow-up period. <i>Office</i> workers compared with <i>manual</i> workers were at a higher risk of breast cancer after adjusting for reproductive health factors and physical activity indicators; the multivariable HR (95% CI) was 1.65 (1.07 – 2.55). Women who had mainly a <i>sitting</i> position during work compared with those <i>moving</i> during work had the higher risk; the multivariable HR (95%CI) of 1.45 (1.01 – 2.12). The excess risk of breast cancer was observed for <i>office</i> workers when time spent in walking was < 30 minutes/ day; HR (95% CI) was 1.11 (1.01-1.23), and for women mainly at a <i>sitting</i> position during work when time spent in walking was 30-59 minutes or < 30 minutes/ day; HRs (95% CIs) were 1.87 (1.07-3.27) and 1.74 (1.07-2.83), respectively.	
〔総 括(Conclusion)〕	
In conclusion, job category and occupational activity were associated with breast cancer incidence risk. Women who worked in <i>office</i> and those whose jobs mainly required them to <i>sit</i> were at the higher risk of developing breast cancer. The higher risk of breast cancer in <i>office</i> jobs and <i>mostly sitting</i> during work was evident among women whose walking activities were limited. Our findings imply that women who work in <i>offices</i> and <i>mainly sit</i> during the workday should increase their physical activity to reduce their risk of developing breast cancer.	



## 論文審査の結果の要旨及び担当者

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論文審査の結果の要旨

Breast cancer represented the leading cause of cancer deaths among women in Japan. Our research assesses the associations of job category (*manual, office, professional, and unclassified*) and occupational activity (*moving, mainly standing and mainly sitting*) with the risk of breast cancer incidence among Japanese female workers. We conducted stratified analyses on the basis of physical activity indicated by walking time per day (indoor, work, home and outdoor). A prospective cohort study involving 19,041 women aged 40-79 years who have reported their occupational data and followed-up (1988 to 2009). The Cox proportional hazard models were operated to calculate the hazard ratios (HRs) and corresponding 95% confidence intervals (CIs). There were 138 incident cases of breast cancer during 13.3 years median follow-up period. Job category and occupational activity were associated with breast cancer incidence risk. Women who worked in *office* and those whose jobs mainly required them to *sit* were at the higher risk of developing breast cancer. The higher risk of breast cancer in *office* jobs and *mostly sitting* during work was evident among women whose walking activities were limited. Our findings imply that women who work in *offices* and *mainly sit* during the workday should increase their physical activity to reduce their risk of developing breast cancer.

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