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# Breast Health Global Initiative Consensus Declaration on Breast Cancer Treatment in Middle-Income Countries (Mrcs)

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## Abstract

As the pattern of disease shifts from infectious diseases to non-communicable diseases like breast cancer, the most common cancer among women in middle resource countries (MRCs), cancer control programs are becoming a priority. The Center Asset Situations Working Gathering of the BHGI 2010 Worldwide Highest point met to recognize normal issues and obstructions to bosom disease identification, analysis and treatment in MRCs. They came to the conclusion that programs for early detection of breast cancer should continue to be important, include clinical breast examination (CBE) programs with or without mammography, and include active awareness programs. Despite improved public education efforts, mammographic screening is typically opportunistic, and early detection programs frequently face logistical, financial, and cultural obstacles. A disparity in access to health care can result from geographical and financial constraints on the availability of multidisciplinary treatment services. Limited personal finances can make it difficult for many patients to receive medical care if they do not have adequate health insurance. Quality assurance programs remain a challenge despite the improved availability of services like surgery, pathology, radiology, and radiotherapy. To improve outcomes, rehabilitation programs for survivors and improved access to anticancer medications are required. In order to improve breast cancer early detection and treatment, government health care financing in MRCs needs to be focused and sustained.

**Keywords:** Breast cancer; Middle resource countries; Early detection; Treatment; Multidisciplinary services; Health care financing

## Introduction

### What is a country with middle resources?

The World Bank divides middle resource countries (MRCs) into lower-MRCs and upper-MRCs. According to 2009 data, lower-MRCs have a GNI of $996–$3945, while upper-MRCs have a GNI of $3946–$12,195. These two divisions of MRCs highlight the variety in economic development. In many MRCs, rapid economic and social development has resulted in a disease pattern typical of high-resource nations, where non-communicable diseases like cardiovascular disease and cancer have largely replaced infectious diseases as the leading causes of death. It's possible that the infrastructure and human resources necessary to develop cancer prevention, early detection, diagnosis, treatment, and palliative care services are available in MRCs, but there are significant limitations in terms of quantity, quality, and accessibility [1].

Every year, over one million new cases of breast cancer are diagnosed, with 45% occurring in low- and middle-income countries (LMCs).2 These LMCs have seen their incidence rates rise, particularly in China and Southeast Asia, which are experiencing rapid economic growth. Due to two major determinants of breast cancer survival, namely late stage at presentation/diagnosis and inadequate treatment, 55% of breast cancer deaths occur in LMCs.3, 4 The 5-year survival rates in MRCs range from 47% in the Philippines, 63% in Thailand, and a surprising high survival rate of 82% in China, all of which are classified as lower-MRCs. The variability in access to cancer diagnostic and treatment facilities, which are typically located around urban centers, is exemplified by the disparities in survival rates among MRCs.5 As a nation progressed from a lower-MRC to an upper-MRC or even a high-income nation, improvements in breast cancer survival are anticipated. For instance, the 25-year pattern in malignant growth endurance in Singapore as it created from a MRC to a high asset country, showed an undeniable improvement in bosom disease endurance (46% in 1968-1972 versus 71% in 1988-1992) because of a blend of fruitful early discovery programs and viable treatment services [2].

Late-stage show of bosom malignant growth is as yet normal in MRCs.3 In Malaysia, an upper-MRC, 30-40% of ladies with bosom malignant growth present with stage III-IV disease7 while in Egypt, a lower-MRCs, 70% of ladies present with late-stage disease.8 Boundaries to early discovery incorporate socio-social hindrances as well as wellbeing framework obstructions, for example, lacking wellbeing framework foundations and deficient medical services funding.

## Methods

This audit and meta-examination was led adhering to the rules created by the Meta-investigation Of Observational Investigations in The study of disease transmission Gathering. In June 2009, two authors (CP and PB) independently used PubMed to conduct a systematic literature search in the Medline database using the following keywords, without regard to the year of publication or language: acrylamide OR glycidamide) AND (malignant growth OR neoplasm OR cancer). Possibly pertinent articles were recovered and surveyed by one commentator (CP), who arranged the examinations as per situation of openness (word related openness, dietary admission of acrylamide, dietary admission of acrylamide-containing food sources and biomarkers of acrylamide openness) and prohibited those that

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were not in that frame of mind for this audit (for example studies pointed toward lessening the amount of acrylamide in unambiguous food sources, biomedical examination utilizing acrylamide gels, concentrates on not zeroed in on disease risk, and so on.). There were no relevant articles chosen that were published outside of English. The inclusion of abstracts and unpublished studies was not made. We also looked through reference lists of retrieved articles and the World Health Organization and Food and Agricultural Organization's acrylamide research website [3]. (http://www.foodrisk.org/acrylamide/index.cfm). We did not assign quality scores to the studies, and no studies were excluded a priori due to design or data quality flaws. A sum of 586 distributions was distinguished in the pursuit (supplemental Reference section 1, accessible at Records of Oncology on the web). Figure 1 in supplemental Appendix (available online at Annals of Oncology) depicts the selection of relevant publications for our review. 407 publications, mostly experimental ones involving acrylamide-based gels, were ruled out by looking at their titles (a1–a407); The remaining 179 publications' abstracts were examined in depth. 48 distributions were rejected as nonrelevant (audits, exploratory and clinical investigations, and so on) ( a408–a455), whereas the remaining 131 publications were abstracted and thoroughly analyzed. The remaining 25 publications were retained for the review, but 106 of them (a456–a561) did not report original epidemiological results on acrylamide and cancer. The audit of the reference arrangements of these distributions brought about the distinguishing proof of one extra report. 19 of these studies examined the dietary intake of acrylamide, Biomarkers of exposure were the subject of two publications, and occupational exposure was the subject of six publications [4].

At the point when no less than two free gamble gauges were accessible for a particular disease — openness situation mix, we did a meta-investigation and determined pooled RR gauges, and the comparing 95% CIs, for the most elevated versus least degree of openness and for an addition of 10 μg/day of dietary acrylamide consumption. For the first, we pooled the estimates using a random-effects model, utilizing the moment estimator of the variance between studies and the sum of the inverse of the variance of the log (RR) as weights. For the last option, when the RR for an addition of 10 μg/day of dietary acrylamide was not accessible from the first investigation, we assessed it by relating the regular logarithm of the RR to the comparing mean worth of acrylamide admission across openness classifications, considering the way that appraisals of chance for ensuing degrees of admission are connected [5].

## Results

This audit and meta-examination was led adhering to the rules created by the Meta-investigation Of Observational Investigations in The study of disease transmission Gathering. In June 2009, two authors (CP and PB) independently used PubMed to conduct a systematic literature search in the Medline database using the following keywords, without regard to the year of publication or language: acrylamide OR glycidamide) AND (malignant growth OR neoplasm OR cancer) [6]. Possibly pertinent articles were recovered and surveyed by one commentator (CP), who arranged the examinations as per situation of openness (word related openness, dietary admission of acrylamide, dietary admission of acrylamide-containing food sources and biomarkers of acrylamide openness) and prohibited those that were not in that frame of mind for this audit (for example studies pointed toward lessening the amount of acrylamide in unambiguous food sources, biomedical examination utilizing acrylamide gels, concentrates on not zeroed in on disease risk, and so on.). There were no relevant articles chosen that were published outside of English [7]. The inclusion of abstracts and unpublished studies was not made. We also looked through reference lists of retrieved articles and the World Health Organization and Food and Agricultural Organization's acrylamide research website (http://www.foodrisk.org/acrylamide/index.cfm). We did not assign quality scores to the studies, and no studies were excluded a priori due to design or data quality flaws. A sum of 586 distributions were distinguished in the pursuit (supplemental Reference section 1, accessible at Records of Oncology on the web). Figure 1 in supplemental Appendix (available online at Annals of Oncology) depicts the selection of relevant publications for our review. 407 publications, mostly experimental ones involving acrylamide-based gels, were ruled out by looking at their titles (a1–a407); [8] the remaining 179 publications' abstracts were examined in depth. 48 distributions were rejected as nonrelevant (audits, exploratory and clinical investigations, and so on) ( a408–a455), whereas the remaining 131 publications were abstracted and thoroughly analyzed. The remaining 25 publications were retained for the review, but 106 of them (a456–a561) did not report original epidemiological results on acrylamide and cancer. The audit of the reference arrangements of these distributions brought about the distinguishing proof of one extra report. 19 of these studies examined the dietary intake of acrylamide, Biomarkers of exposure were the subject of two publications, and occupational exposure was the subject of six publications [9].

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## Discussion

This investigation of all suitable epidemiological information on acrylamide openness demonstrates an absence of expanded risk for most malignant growth locales. Kidney cancer is one cancer site where dietary acrylamide exposure cannot be ruled out [11]. The meta-analysis found only a small risk increase, but the only cohort study that was available reported a significant association. The results of two of the three case–control studies that were available were similar, but not significantly so. Endometrial and ovarian cancers had an overall RR that was close to unity, but the estimates at this time were higher than unity for people who had never smoked. In fact, the RRs for the highest versus lowest intake of acrylamide for endometrial cancer were 1.50 (95% CI 0.92–2.45) and 1.49 (95% CI 0.66–3.35) when we pooled the data for never smokers for these two neoplasms [12]. In addition, an increased risk for these two neoplasms was suggested by recently published NHS data that were not included in the current meta-analysis. Before any final conclusion can be reached, additional cohort studies' results are required. Findings from subset analyses, which are frequently contradictory and typically based on reports from one or two studies, make it difficult to make clear and straightforward interpretations of the available data regarding the carcinogenicity or otherwise of acrylamide [13]. Chosen discoveries in a couple of subgroups or malignant growth subtypes merit further examination,

for example, the positive relationship with oesophageal and pancreatic disease in corpulent subjects, with ER+ bosom malignant growth — in view of biomarkers of openness — in the Danish Eating routine, Malignant growth and Wellbeing study and the opposite relationship with cellular breakdown in the lungs in ladies. The available studies of dietary acrylamide, as measured by FFQ or biomarkers, demonstrate a lack of overall increased risk for all other cancers. Positive (or inverse, as in the case of colorectal cancer) associations have been reported in a few studies, but these findings are typically supported by the findings of other studies. Consequently, there is no correlation between these meta-analyses and cancer risk [14].

## Conclusion

Neither occupational nor dietary exposure to acrylamide has been linked to an increased risk of cancer in epidemiological studies. However, based on the available data, it is impossible to rule out a slight increase in the risk of kidney cancer. Epidemiological studies, as previously stated, may be affected by exposure misclassification and other biases, leading to an underestimation of risk. These studies are unable to detect even a modest increase in risk. As a result, despite the fact that epidemiological studies have failed to identify an increased risk of cancer in humans, the outcomes of risk assessment exercises should be interpreted with caution. Even though the exact impact on human cancer is still unknown, actions to reduce human exposure are justifiable, just as they are with other animal carcinogens for which there is no supporting epidemiological evidence.

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## Conflict of Interest

None

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