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# **Chemotherapy Induced Nausea and Vomiting in Patients Cancer Running Breasts \_ Chemotherapy at Hospital: Literature Review**

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**Abstract**---Background: Breast cancer is a malignant tumor formed from breast cells that grow and develop uncontrollably so that it can spread between tissues or organs near the breast or to other parts of the body. The treatment that is the main alternative and is often used to treat cancer in hospitals is chemotherapy. Chemotherapy provides various side effects, one of which is nausea and vomiting. Purpose: For knowing how is the experience of CINV (Chemotherapy Induced Nausea and Vomiting) on patients cancer breasts that undergo chemotherapy at hospital. Methods: Literature sources, national and international databases from 2016-2021: PubMed, *ScienceDirect* and *Google Scholar* with keywords \_ *breast cancer, chemotherapy, CINV and Experience*. Literature that meets the inclusion criteria with use protocol review via PRISMA guideline. Stages through screening criteria inclusion and exclusion, quality assessment and data extraction. Assessment quality article this using JBI (the Joanna Briggs Institute). Result: Literature found \_ from a database of 636 articles. After all article filtered, obtained 6 articles which are fulfil terms of review with results as following : CINV experience in patients cancer breasts that undergo chemotherapy at hospital have near experience \_ same , where patient complained nausea and vomiting start from cycle first until end chemotherapy with low intensity \_ to the high as well as from phase I nor delay phase. Conclusion: CINV experience in breast cancer patients is a serious matter that should be a special concern.

**Keywords**---Breast Cancer, Chemotherapy, CINV, Experience.

## Introduction

Cancer is disease no marked infectious \_ with growth cell not normal/ continuous and not controlled that can damage tissues surrounding as well as could spread to far away place from origin is called metastases. Cell cancer character malignant could originated or grow from every type cells in the human body ( Depkes RI, 2009). Cancer until nowadays becomes problem health in the world, including Indonesia. Every year more of 185,000 women diagnosed cancer breasts . Cancer breast as reason second biggest dead after cancer lungs in the United States because there is about 43,500 deaths consequence cancer breast every year ( Ministry of Health RI, 2015).

Type lots of cancer suffered and feared by women is cancer breasts . Cancer breast is a malignant tumor that forms from cells breasts that grow and develop without under control so that could spread between \_ tissues or organs near breast or to part body others ( Ministry of Health, 2016). Data in Indonesia is estimated there are 100 patients new per 100,000 population every year . This means from total 237 million residents , there about 237,000 sufferers cancer new every year . Approximately 2.2% of deaths all age caused by cancer vicious . Prevalence case cancer highest that is cancer breast 43.3%, cancer prostate 30.7%, and cancer lung 23.1% ( Ministry of Health , 2016).

Management that becomes alternative main and frequent conducted for treat cancer at hospital is chemotherapy . Chemotherapy give various effect side , one of them is nausea and vomiting . Nauseous is trend for gag or as feeling in the throat or warning epigastric area a individual that gag will quick happen . Nauseous often accompanied with enhancement activity system nerve parasympathetic including diaphoresis, drooling , bradycardia , pallor and decreased level breathing . Gag defined as ejection or expenditure contents stomach through mouth , often need strong drive ( Dipiro et al., 2015).

There is a number of study related nausea and vomiting in patients cancer medium boobs \_ undergo treatment chemotherapy . According to (Faisal, 2012) the effect side most experienced \_ patient cancer breast at Doctor 's Hospital Soedarso who underwent chemotherapy cycles 4 and 6 are alopecia , followed nausea and vomiting . Lee, Jung et al ( 2017) also stated that woman with cancer breasts that undergo prior neoadjuvant chemotherapy operation , found have enhancement CINV (Chemotherapy Induced Nausea and Vomitting ) risk .

Nausea and vomiting in chemotherapy patients was originally coded by the World Health Organization (WHO) in 1979 as a unique entity and was graded according to the severity of vomiting (Ruggiero, Rizzo et al. 2018). Whereas according to (De Laurentiis, Bonfadini et al. 2018) the incidence of CINV was assessed from patient diaries after the first chemotherapy cycle, The overall incidence rate of nausea and vomiting among the 246 patients evaluated was 63.0% and 25.4%, respectively. CINV remains a critical problem in patients undergoing chemotherapy, despite antiemetic treatment.

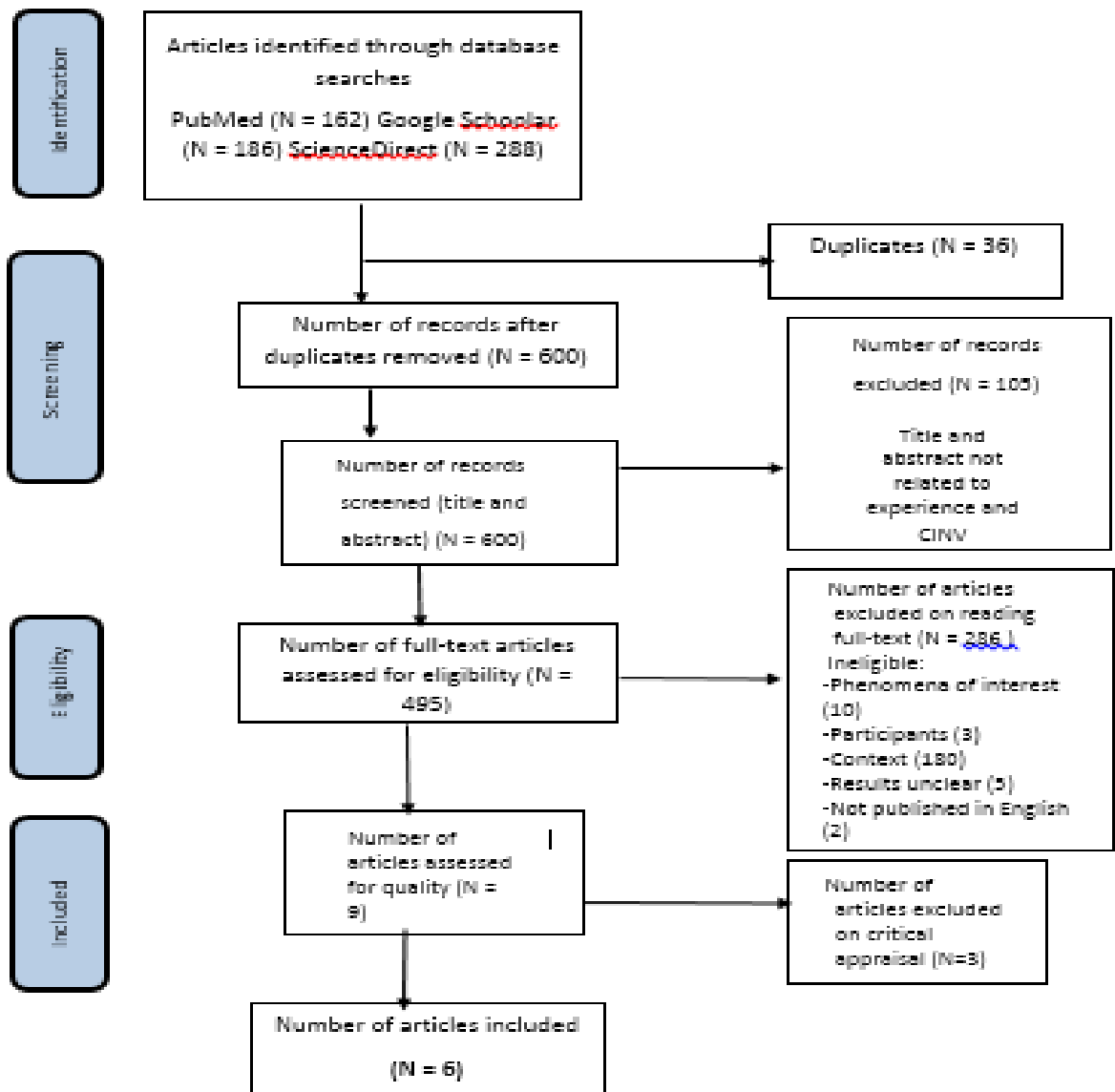
Seeing the above, it can be seen that the experience of nausea and vomiting of breast cancer patients in undergoing chemotherapy is very diverse and influenced by factors. So that researchers are interested in conducting a literature review

related to the experience of CINV (Chemotherapy Induced Nausea and Vomiting) in breast cancer patients undergoing chemotherapy in hospital. Literature review as an effort to synthesize the results of previous studies so that they can be used as references for related research.

### **Method**

Library and search sources from national and international databases from 2016-2021 include: PubMed, ScienceDirect and Google Scholar. The literature obtained was 6 articles that met the inclusion criteria using the review protocol through the PRISMA guideline. Stages through screening inclusion and exclusion criteria, quality assessment and data extraction. Assessment of the quality of this article using JBI (the Joanna Briggs Institute). Inclusion criteria that can be used to determine that an article deserves to be included in this review are all research articles with qualitative descriptive studies and mixed methods, research published in 2016-2021, research articles involving all types of cancer including breast cancer patients discussed in one journal that is undergoing chemotherapy in a hospital and the experience journal is full text.

### Protokol PRISMA



PRISMA flow diagram of search and study selection

## Table of Articles in Review

No	Researcher name & year	Title	Research design	Settings	Population	Characteristics respondent	Intervention	Comparison	Outcome/ result	Strength	Limitation	Description / argument
1.	(Salihah, Mazlan et al. 2016)	Chemotherapy-induced nausea and vomiting: exploring patients' subjective experience	Study descriptive qualitative	Polyclinic take care road oncology Hospital Sultanah Nur Zahirah , Kuala Terengganu, Malaysia.	13 patients	Age , cancer breasts at all stages, receive treatment chemotherapy and ever experience nausea and/ or gag with level severity anything , communicate in language Malay or England .	Semi - structured interview consisting of from six question used as tool studies	-	Of 13 patients gag with easy declared as "  The act of vomiting ", but nauseous is difficult symptoms _ for explained	Qualitative data obtained _ from study this has give more insight _ in about experience subjective CINV patients and how symptom this influence life daily them .	Data collected only from woman with cancer breasts that receive chemotherapy at the clinic take care road oncology Hospital government .	Researcher will get more data and results maximum if researcher take sample no only in clinic take care road Hospital , but also take samples in patients treated at hospital or those who are in the community
2.	(Rha, Song et al. 2016)	Gaps exist between patients' experience and clinicians' awareness of symptoms after chemotherapy: CINV and accompanying symptoms	Study studies observational prospective ( mixed method )	Two House university hospital in Korea	313 patients cancer	Patients with breast, abdominal , lung, or colorectal cancer.  Doctors and nurses with 2 years experience in oncology.	Patient requested for take note of their CINV and n experience accompanying symptoms _ in book daily During cycle CTx first and second . At the end research ,	Doctor requested for fill in questionnaire about perception they about factor risk of incident CINV induced vomiting _ chemotherapy (CIV) and	Gag occur not enough from very During phase acute and phase delayed . Patient experience intensity nauseous acute 2 in 0-10 NRS and intensity nauseous delayed 3 in 0-10 NRS.  In general, doctors overestimate patients	Studies first to ask patient and doctor about destination they for management CINV symptoms .	Occur difference opinion Among patients and staff health ( sample no homogeneous )	Phase beginning patient gag not enough from once ( cycle 1), but doctor say that CINV experience is serious thing _

No	Researcher name & year	Title	Research design	Settings	Population	Characteristics respondent	Intervention	Comparison	Outcome/ result	Strength	Limitation	Description / argument
							patient asked about factor CINV risks and goals maintenance ( <i>deep interview</i> )	severity induced nausea _ chemotherapy (CIN) in HEC and MEC with antiemetic	CINV experience .			
3.	(McGrath, Chang et al. 2020)	Exploring the nausea experience among female patients with breast cancer; A pilot interview study	Studies pilot ( <i>pilot study</i> ) this involve semi - structured interview	The Ottawa Health Science Network Research Ethics Board	10 patients	Age, ECOG status, time from last treatment, history of previous radiation therapy, chemotherapy, RINV, CINV and anticipatory nausea.	Interview guide developed for discuss three field main : definition symptom , scale evaluation nausea and sub- features . Interview recorded and transcribed digitally using Microsoft Word .	-	Patient define nauseous more varied than vomit . Patient has experience intensity different nausea _ and considered report intensity worst . Intensity episodes long considered more problem than intensity episodes low miss from duration . Duration and character nauseous difficult explained . Various symptom related , factor trigger and reduce documented . Nauseous impact bad on quality live .	Studies pilot give information valuable so that for used with design more survey studies _ big .	Researcher feel sample taken _ still little and taken only 1 type cancer .	Patient with cancer breast Possible experience and report nauseous by different from patient with gastrointestinal cancer or system nerve center because effect tumor modulation and its treatment

No	Researcher name & year	Title	Research design	Settings	Population	Characteristics respondent	Intervention	Comparison	Outcome/ result	Strength	Limitation	Description / argument
4.	(Huang, Li et al. 2021)	Chemotherapy-Induced Nausea and Vomiting in Breast Cancer Patients: A Multicenter Prospective Observational Study	Studies prospective and observational ( <i>mixed methods</i> )	Ward take care stay at two Hospital in China's Hunan province	400 patients	Age, Chinese woman, breast cancer, receiving chemotherapy	All participants who agree invited for do interview stare advance During day second chemotherapy for collect acute CINV data . Interview phone advanced done on the day 6th after _ chemotherapy for collect pending CINV data	Comparison of patients receiving chemotherapy between day 2 and day 6	Between 400 patients , 29.8% and 23.5%, respectively, had acute and delayed CINV . Factor associated risks _ with acute CINV including pain /insomnia, history of CINV, and highly emetogenic chemotherapy . Drunk history travel (MS), history of CINV, number of cycle completed chemotherapy , and the incidence of acute CINV is factor significant risk _ for pending CINV	Studies this is report first to show that , between _ patient with treatment chemotherapy cancer breasts , those who experience pain /insomnia is a population risky high , while those with CINV in phase I will increase CINV risk in phase delayed .	Study this identify pain /insomnia, history of CINV, regimen chemotherapy emetic related height _ with enhancement risk of acute CINV	More many attention must given to the management of CINV for patient with symptom like pain and insomnia before chemotherapy .
5.	(Childs, Looker et al. 2019)	What occurs in the other 20% of cancer patients with chemotherapy-induced nausea and vomiting (CINV)? A	Method analytic qualitative	Mayo Clinic in Rochester, Minnesota	20 patients	Age, cancer, gender	Semi-structured interview with every patient in room personally in the chemotherapy unit . Built -in interview	-	Breast cancer patients describe their nausea like terrible morning sickness	Studies first in the era of therapy highly effective antiemetic that uses method qualitative for capture and characterize experience life	Some of the patients interviewed were not open about their experience of nausea and vomiting, regardless of the underlying reason for remaining silent.	Patients should be encouraged to be open about their own experiences with nausea and vomiting without fear of negative consequences (e.g., discontinuing medication).

No	Research er name & year	Title	Research design	Settings	Populati on	Characteristics respondent	Intervention	Comparison	Outcome/ result	Strength	Limitation	Description / argument
		single- institution qualitative study					guide based on experience clinical team study and review published literature . _ Interviewer allowed for repeat question based on need patient or for submit question advanced During all question the in accordance with destination main study			patient with CINV		

No	Researcher name & year	Title	Research design	Settings	Population	Characteristics respondent	Intervention	Comparison	Outcome/ result	Strength	Limitation	Description / argument
6.	(Nies, Ali et al. 2018)	A qualitative study among breast cancer patients on chemotherapy: experiences and side-effects	Method semi structured interview qualitative	Two Hospital maintenance tertiary in Malaysia and National Association Malaysian Cancer .	36 patients	Age, ethnicity, stage of cancer	Semi-structured interview used as layout _ for investigate more carry on about related issues _ with destination research . Topics main discussed _ in interview consist from : view about chemotherapy , experience chemotherapy , effect side chemotherapy , as well as use drug complementary and alternative .	-	mostly _ patient in study this report that gag is one _ effect the most worrying side because by drastic influence last eat they	Semi-structured interview qualitatively carried out capable capture various experience patients and effects side related use chemotherapy for cancer breast	Some of the samples who refused to participate had other views about the side effects experienced from giving chemotherapy. Similarly, participants who were skeptical or fearful of chemotherapy and stopped chemotherapy early were not willing to be interviewed.	Researchers must work harder in building a trusting relationship with patients, so that they are willing to be interviewed and can express all their complaints during chemotherapy.

## Discussion

CINV affects many aspect life patients , especially those related to with eat , function physical , emotional , and social , but level impact unique for every patient ( Salihah -Mazlan, 2016) . This thing strengthened by research ilyas-bahaj (2020) which states that the impact of CINV on quality life them . Impact it varies greatly in various aspect , with enjoy food Becomes aspect quality most affected lives .

There is difference opinions that occur between \_ patient and doctor about CINV experience . It says that doctor exaggerating The patient 's CINV experience and establish lack of purpose strict for control symptoms . A number of patient disclose that CINV experience on phase beginning chemotherapy is reasonable thing \_ However doctor say that CINV experience is serious and must \_ \_ noticed ( Rha -Song, 2016). The research results are almost same found in research Mollasiotis -Saunders (2008) where they mention that nausea and vomiting in phase beginning still controlled with fine , however nausea and vomiting permanent Becomes significant problem \_ in optimal practice , and management of CINV yet achieved . So that urgent for understand more clear base biological nausea that will help in manage symptom complex this by more effective in practice .

Three effect side experienced by patients who received \_ \_ chemotherapy in this study is hair fall off , lips chapped / mouth dry , and vomiting . mostly \_ patient in study this also reports that gag is one \_ effect the most worrying side because by drastic influence lust eat them . Confidence about treatment alternative for patients cancer breasts are also mentioned in one interview . Patient say that " I " *of course drink tea butterfly because they say that delicious . After chemotherapy , I can feel a little pain and nausea inside \_ body me , but after I drink it , I feel good and not feel sick as well as nauseous nor gag like before . Even until now I feeling fresh and healthy ... Maybe suitable with body me . At least I feel fine just until now "* ( Nies -Ali, 2018). Research results this is also in line with theory convenience from Kolcaba where approach theory Kolcaba explain convenience has 3 forms : The urge (relief) is condition patient yeng need need specific and immediate . Tranquility (ease) ease something condition peaceful . Satisfaction heart ( Trancedence ) that is something condition capable resolve the problem ( Kolcaba 2015).

CINV sometimes so severe and varied so that looks difficult for patient for characterized . In effort for do it , some nausea and vomiting bound with more situation \_ close . For example , a patient explain it as " feeling " sickening like you've got the worst of the flu ." A mom who is treated because cancer breast describe nausea as " terrible morning sickness " (Childs-Looker , 2019). In Thing this can customized with study from Salihah -Mazlan (2016) where CINV keep going Becomes impact problem \_ bad at life daily patient , so need more understanding \_ good from professionals \_ maintenance health about needs and concerns patient when experience symptom this .

Experience nauseous During semi - structured interview with patient woman with cancer breast obtained outlook about how they define symptoms , system which assessment do they like , and sub- features which nausea can they detection . Patient define nauseous more varied than vomit . Most patient agree with definition ' standard ' symptoms after requested . Patient has experience intensity different and considered nausea \_ report intensity worst . Intensity episodes long considered more problem than intensity episodes low miss from duration . Duration and character nauseous difficult explained . Various symptom related , factor trigger and reduce documented so that nauseous impact bad on quality live ( Mcgrath -Chang, 2020). This thing in accordance with study Bergkvizt-Wengstrom (2006) where experience nausea and vomiting During treatment chemotherapy have effect deep in experience cancer , and with thereby could influence related future decisions \_ \_ with new treatment .

mostly \_ participant suffer from CINV though level more CINV occurrences low compared to other symptoms . Between patient with treatment chemotherapy cancer breasts , those who experience pain /insomnia is a patient risky high , while they happen \_ with CINV in phase I will increase CINV risk in phase delayed (Huang-Li, 2021). Same research \_ obtained from

Bloechl-Deuson (2006) which states that patients who do not experience gag or nauseous during the first 24 hours post chemotherapy report the impact of CINV on life day-to-day activities caused by CINV delays .

### **Conclusion**

This post has serve a number of review results related research \_ with CINV experience in patients cancer breasts that undergo chemotherapy at hospital . After conducted review 6 articles , it can be concluded that the CINV experience in breast cancer patients is serious thing to do \_ be one \_ attention special . Experience CINV from phase I nor phase delay will greatly affect the quality life patient, where patient can determine for permanent stop undergo chemotherapy or permanent want to continue chemotherapy until with finished.

### **Limitations**

This study have limitations where still very less journal study related to the CINV experience in patients cancer breasts that undergo chemotherapy at hospital using \_ method qualitative . because with do study qualitative so our can get more information \_ many , diverse and detailed related to CINV experience in patients cancer breast live from patient that .

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