

Date: Thursday, May 06, 2021 Statistics: 213 words Plagiarized / 5301 Total words Remarks: Low Plagiarism Detected - Your Document needs Optional Improvement.

Risk Factors for Breast Cancer Occurrence in Women Age 15-65 Years in Kendari City in 2018 La Banudit', Nur Hamsar Sarmin2, Djasmumi2 and Sitti Aisar I Heakh Polytechnic of Kendari, Ministry ofHeakh, Jalan Jenderal A.H Nosution No. G- t4, Kanbu, Kendai, Sulaw€si Tenggara, Indotesi o 9 3 2 3 I 2 Mondata watqa cottese of Heokh Scienc*, *j#!i#t i;i No-eutia^, Ka bu, Kendai, Sutav)esi Tenssdro, Keyvords Breast Cancer, Menarche, Breastfeeding History Family Hisrory, Horopnal Contiaception, Smokiog History.

Abstract: Basic Health Research of Indon€sia "Riskesdas" i, 20 I 3 noted the prevalence of cancer in Indonesia was I .4 per I000 populatioD or arcw,d 147,792 people aod is the number 7 cause of death (5.7%) ofall causes of death. The incidence of cancer in Soulheast Sulawesi was 0.5 %" with an estimated absolute numb6 of 590 cases. This research was amlytic survey research with a case-mn&ol sludy approach.

The population io this study rf,€re wometr aged I555 y€als \+.ho were diagnosed with tfeast cancer. The sample amounted to I0o r€spoodents divided into 50 case samples and 50 control samples. The test analysis used was the odds ratio. The odds ratio test r€sults indicated that a history of menarche was a risk factor for breast cancef, a hisrory of br€astfeeding was a risk factor for b.east cancer incidence. Family history was a risk factor for breast cancer. A history of bormooal coDaac€ption was a risk fadtr for breast cancer.

The age of giving birth to a frst child was not a risk factor for breast cancer, \$Doking history *as a risk factor for breast caocer. I INTRODUCTION Cancer is one of the leading causes of death worldwide. Cancer is an abnormal growth of body tissue cells that tum malignant. Cancer is a disease that does ot recognize social status and can attack anyone and arise due to abnormal growth of body tissue cells that tum into carcer cells in its development.

Breast cancer is a condition where cells have lost control and normal mechanisms, rezulting in abnormal, fast, and uncontrolled groMh that occurs in heast tissue. (Hesna et al., 2019; Suardita, Chrisnawati, & Agustina, 2016) Based on data Aom Globql Burden Cancer (Globocan), the,laterz ational Agencyfor Research on Cancer (IARC), stated that breast carcer was the highest cause ofdeath from cancer in women. Breast cancer ranks first in new cases, and deaths ftom cancerwere 43.3% and 12.9%.

Globocan also presented data on cases ofbreast cancer in 2012 that occurred in the world reached 1,6?7,000 aDd the rnortality rate reached 522,000. (Fan et al., 2019; Wahyuni, Chrisnawati. & Santoso, n.d.) The incideoce of cancer in Asia was 20 people among the 100,000 population. While the incidence of breast cancer in Southeast Asia was recorded at 55,097 cases, and the death rate was 24,961 cases.

Breast cancer is a major problem worldwide because of its high mortality and morbidity. (Fan et al., 2019; Suardita et al., 2016) Globocan dala lor 2012 noled that the incidence of cancer in women in Indonesia is 134 per 100,000 population with the highest incidence ofbreast cancer of40 per 100.000, followed by cervical cancer of 17 per 100.000 wonrn. Furthermore, Globocan estimated the monality rate in Indonesia for breast cancer to be 16.6

deaths per 100,000 populatiorl followed by cervical cancer with 8.2 deaths per 100,000 population. An increasing number of breast cancers in Indonesia can be seen from patients who carne for treatment, where 6&70% of sufferers were in advanced staBcs. (Rukmi & Handayarri, 201 3) More than 25% of women were diagnosed with cancer, one of which was breast cancer.

Until now, the exact cause of breast cancer was unknown, but many studies had shown that there were several factors associated with an increased risk or possibility B.drd. L, Ssrin, N.. Diadri . and A!.. S. Ili* k srB hr Br@il Co,B Oerll'E h Wor6 aO. ,S \6arl h l(.xb C&y h ?OIA. OOI: 10.5c2o/u8191204631P7o h MC. otd. d H&1 &inEl!r&.dcdtra I,S,C atqq-e270 ISEN: cTtl\$-r!#6 C.rriishi O 2020 by SCIIEPAESS - S.ie@ aftl T.chnology hriaalons. Lrja A,I 4ht3 re.sEd ?63 HSIC 2019 -The Heallh Scienc€ International Conference OncologyClinic, which specializes in handling breast cancer cases from 2015 to 2018, found 9I sufferers and 35 domiciled in Kendari Cily. Breast cancer is sancer that is commonly found in wonrn aged I 565 years. Based on the description above.

breast cancer is one of the lifc-threatening health problems that continue to experience an increase in incidence caused by various factors. Therefore it is very importa.nt to research to uwlyze the risk factors for b,reast caucer. 2 METHODS This research was analyic suwey research with case- control approach. Research with a case-control approach was research conducted to determ.ine risk fuctors or health problems that wsre suspected to have a close relationship with diseases that occu in the community.

Tk sample is part of the number and characteristics of the population or pan of the object under study and is considsred representative of the entte population. The control group was taken from the community in the area of Public Hospital of Bahteramas with the same age criteria as the case group and had carried out codmls in polyclinic of oncology, so the number of samples in this study was 100 people consisting of 50 cas€ groups and 50 contlol groups.

Matching used in this study was age, ie wornen aged 15 to 65 years and wonren who were maded to balance between case samples and control samples to have the same characteristics. Data collected from rcspondents during the study took phce using a questionruire. Secondary data is data obtained from other parties, namely &om medical record repofis of Public Hospital of Bahteramas, Public Hospital of Kendari City, and Oncology Clinic of Anugrah Medika Kendari.Data arnlysis is an activity in research which includes the preparatio& tabulation and application of data.

Explain or describ€ th€ characteristics of each research variable. This analysis produced the frequency distribution aud percentage of each variable. This analysis is used to see the extent of the relationship baween variables. In this study the odds ratio test, which is a hypothesis test or analysis to obtain relative risk.

Analysis of the data in this case to test the null hyp,othesis was used epidemiological analysis (Odds Ratio) using a 2x2 table. h conducting rcsearcb, it is necessary to have a recommendation from th€ institution ofanother parly by applying for permission to the agency wh€re the 264 of breast cancer. These factom were risk factors which include reproductive fa.tors such as menarche or first menstrualion less than 12 years old, menopause at the age of more than 50 years, giving birth to a first child over 30 years of age, parity, history of breastfeeding; endocrine factors such as long-term use of oral contraceptives; diets such as fatty foods, alcohol; genetic or family history, exposure to ion and ultraviolet (IfV) radiation during breast groMI! history of smoking or exposwe to cigarette smoke. (Fan et al.,2019; Wlatt, Jenkins, Plevak, Pont, & Pruthi, 2019) The use oforal contraceptives (birth control pills) had a slightly greater risk ofdeveloping breast cancer than women win had never used it. This risk can decrease after stopping pill use.

Women who stop using oral coltraceptives for more than I0 years were less likely to have an increased risk of breast cancer. In addition to contraceptive pills, other hormonal contraceptives such as idectable contraceptives given every 3 rmnths were also known to affect keast cancer. Wonren who used injectable contraceptiygs teDd to have an increased risk of breast canc€r. (Phipps et al.,

201 I) Palmsr et al (2011) in Rukmi (2013) showed that the age ofgiving binh to a first child was a factor that can cause a wolrdn to develop breast cancer. Women with a history ofgiving birth to their first child before the age of 25 had a 30% to 4fflo reduction in the risk of breast cancer compared to women who had children after the age of 35 or in uulliparous women, regardless of the number of birtirs.

The increased risk of developing brreast cancer was thought to be due to the stimulation of rnaturation of breast cells induced by prcgnaacy, which madc these cells nrore sensitive to carcinogenic ransformations. (Rukmi & Handayani, 2013) Suciawati (2017) explained that wornen who srnke or were exposed !o cigarette smoke can trigger breast cancer.

Cigarette srnoke contains chemicals in higher concentratiors and is very dangerous for health. The longer exposure to cigarette smoke, the more particles of substances that are toxic and carcinogens accumulate in the body. (Ayu, Setiowati, Tanngo, & Soebijanto, 2016) Initial studies at the Public Hospital of Bahteramas, the number of patients with breast carcer by 87 patients in 2015, then inqeased by 97 patients in 2016 and increased dramatically in 2017 by 128 patients. From January to March 2018 there were 26 patients.

In Public Hospital of Kendari City Hospital there were l8 patients in 2016, der.lining to 12 patients in 2017 and from January to March in 2018 there were 6 patients. Anugrah Medika Medical Rist Factors for Breast Cancer Occurrence in Women Age 15-65 Years in Kendari Ciry in 2018 research. After obtaining approval, the research is conducted by emphasizing research ethics issues which include: InJormed Consent: This coosent sbeet is given to respondents who meet the inclusion criteria, and are accofipanied by the title of the study and the benefits of the study.

If the subject refuses the researcher will not force the will and continue to respect the rights of the subject. Anorymi4): To maintain confidentiality, the researcher will not include the name of the respondent, but the sheet is given a code. ConJidenttality'. T'he confidentiality of r€spondent information is guaranteed by the researcher and only csrtain data groups will be reported as research results.

(Nursalaq 201 3). 3 RESULTSANDDISCUSSION The characteristics of the respondents as described in table I below. The table showed that of the t00 most respondents at age 50-57 which amounted to 34 respoDdents, while the smallest in the age group 58- 65 years as many as I 6. Respondents who had jobs as housewives numtrered 80 people, as nrany as 19 civil servatrts and there wsre I entrepreneur.

The level of educatbn with the highest percentage was 39 people in high school, and the lowest was 8 people in elernentary school Table 1: Characteristics of Respondents in Women Aged 1555 Years in Kendari City. Characte.istics Croup Toral Case Control Age 1441 t2 l2 24 4249 l3 l3 26 50-57 17 t7 34 58-65 8 8 l6 Occupation Horrqewife 39 41 lt0 Civil Scrvant t9 Entrepreneur Level ofeducatioo The distribution of descriptive analysis was described in table 2 showed that out of 100 respondents trased on a history of menarche, rcspondents in the risk category amounted to 25 people (25.0%) and the non-risk category amounted to 75 people (575.0%). For breastfeeding history, there were 43 risk categories (43.0%) and, 57 respondents (57.0%) with no risk categories. Family history at risk was 53 respondents (53.0%), and those who were not at risk were 47 respondents (47.tr/o).

At-risk due to the use of horrnonal contraception as many as 73 people (73.0%), while those who are not at risk were 27 respondents (27.0%). Risks due to the age of giving birth to the first child were 19 respondents (19-070) while those who were not at risk totaled 81 respondents (81-070). Risks resulting liom a smoking history of 72 respondents (72.0%) wtlle those who were not at risk totaled 28 respondents (28.00/o').

Table 2: Distribution ol Respondent Descriptive Analysis in Women Aged I5-65Yeals in Kendari City. No. DescriptiveAnalysis .A n I History of Mmarche Risky

No-Risk 25 '75 25-O 7 5.0 History Breastfeeding of Elementary School 2 6 8 Risky No-Risk 43 57 43.0 57.0 3 History of Family Risky No-fusk 53 4'1 53.0 4'7 .0 4- The Use of Hormooal ContBc?tion Risky NI}.Risk 5. Age of Childbinh First Child Risky No-Risk t9 8t 19.0 81.0

6 History ofsmoking Risky No-Risk '12 28 72.0 28.0 Risk factors for breast cancer seen in table 3 below. The results of the analysis using the Odds Ratio test obtained the value of Odds Ralio (OR) : Middle School IO IO 20 High School 29 IO 39 College 9 24 33 265 73 2't 73.0 27.0 II 8 HSIC 20 I 9 - The Health Scienc€ International Conlerence 2.'105 Cl 95o/o: 1.04G.7.036, this meant that women who had menarche <12 years would be 2.705 times more likely to develop breast carrcq conpared to women who had menarche at age > I2 years.

Because of the value oi OR (2.705)> I, the history of menarche was a risk factor for breast cancer in wonrcn aged 15-65 years in Kcndari City in 2018. The results of the analysis using the Odds Ratio test obtained the value ofOdds Ratio (OR):3.551 CI 95% = 1.541-8-181, this meant that wornen who did not breastfeed thet babies would have a risk of3,551 tim€s greater breast cancer thaa women who breastfed their babies.

Because of the OR value (3,551> I, breastfe€ding history was a risk factor for breast cancer incidence in women aged 15-65 in Kendari City in 2018. The results of the analysis using the Odds Rario test obtained the value of Odds Ratio (OR) : 2.912 CI 950/0 : I ,290-6,571, this rneant that women who had family member who suffered from breast cancer would be 2,9 I 2 times more likely to have breast cancer than those who did not have family members with breast cancer.

Because of the OR vatue (2,912)> I, family history was a risk factor for breast cancer in women aged I5-65 years in Kendari City in 2018. The results of the analysis using the Odds Ratio tcs obtained the value of Odds Ratio (OR) : 14.z162 Cl 950/. : 3 .3972-52,656, this meant that women who used hormnal contraception 2 5 years would have a risk of | 4,2162 times greater ke€st cancer than women who used hormonal contraception <5 years. Because the OR value (14.462> I, a history of hormonal contraceptive use was a risk factor for the incidence of b,reast cancer in women aged I5{5 years in Kendari City in 2018.

The results of the analysis using the Odds Ratio test obtained the value ofOdds Ratio (OR) :0.5 I6 CI 950/0: 0.18/-1.444, this meant that women who given birth to their fist child al age> 35 yean were 0.516 times nore likely to develop breast cancer coryared to wornen who given birth first child at age <35 pars. Because the

OR value (0.516) < t, the age of giving birth to the first child was not <mark>a risk factor</mark> <mark>for the incidence ofbreast cancer</mark> in women aged I5-65 yean in Kendari City in 201 8.

The results of the alalysis using the Odds Ratio test obtained the value of Odds Ralio (OR) : 10.615 Cl 95'/, : 3 .319-33,95 I , this meant that worEn who srnoked or had frm y members who smoked would have a risk of 10,615 times rnore likely to develop breast cancer corrpared to women who did not smoke or norrsmoking family membem.

Because of the OR value (10,615)> I, smoking history was a risk factor for breast cancer incidence in women aged 15-65 years in Kendari City in 2018. If menarche occurrsd above the age of t3 years, the dsk ofcancer dropped 35% compared to g ls who menarche at the age of 12 years and under (Rosna, 2008). Early mensmral age is related to the len6h of exposue to the hormones estrogen and progesterone in women that affect the process of tissue proliferation including breast tissue.

Early menarche will cause a large number of m€nstrual cycles and repeated estogen reduction has a stimulatory effect on the mammary epithelium thcreby increasing the likclihood of abnormal breast tissu€. (Mulia & Conference, 20I7XMa et al., 2010) The results of the analysis using the Odds Rario test obtained the value ofOdds Ratio (OR) = 2.705 CI 95% = 1.04O-'1.036, this meant that wonren who had menarche < I2 years would be 2.705 times more likely to develop breast cancer compared to women who had menarche at age > I 2 years.

Because of the value ofOR (2.705)> I, the history ofmenarche was a risk factor for breast cancer in women aged I5-65 years in Kendari City in 2018. This study was in line with research by Priyatin (2013), the results of statistical analysis obtained OR> t : 2.638, which can increase the risk. This meant that the age of menarche with a risk category increased the incidence of breast cancer.

Women of childbearing age at the age of rnenarche at risk (<12 years) had a risk of 2,638 times higher for breasr cancer. (Wahytni et aL, n.d.) This was consistent with the results of research of (Mulia & Conference, 2017) which stated that there was a significant relationship between early menstruation with breast cancer. Women with early menstruation had 9 times the risk of breast cancer compared with wornen who did not rnenstnratc early.

(Tutuncuoglu & Krogan, 2019) BreastHing does not pmtect women from breast cancer but affects estrogen levels itr a woman's body- The horrmne estrogen in wornen is a major ingredient in breast cancer. Brcastfeeding can reduce estrogen levels, so the risk ofa woman suffering from breast cancer will decrease every time a woman is pregnant ard breastfeeding.

Breastfeeding will suppress the menstrual cycle and can help eliminate toxins in the breast. Breastfeeding can cause changes in brcast cells that male female cells more resistant to cancer-reliated cell mutations. (Banudi, 2013) The resrhs of the analysis using the Odds Ratio test obtained the value ofOdds Ratio (OR) :3.551 CI 9570 = 1.541-8.181, this meart that wornen who did not brsstfeed their babies would have a risk of3,551 tim€s greater breast cance, than women who 266 Risk Faclon for Breast Cancer Occurence in Women Age I5{5 Yea.s i. Kendari City in 20llt breastfed their babies.

Because of the OR value (3,551)> I, breastfeeding history was a risk factor for breast cancer incidence in women aged 15-65 in Kcnda City in 2018. This study was in line with research conducted by Priyatin (2013), the results of statistical analysis obtained OR = 2.118- This meant that breastfeeding with a risk catcgory increased the incidence ofbreast cancer.

The sronger suspicion of breastfeeding with risk categories was <mark>a risk factor for breast</mark> carrcer. Women ofchildbearing age with risk calegories (not breastfeeding) had a risk of 2.118 times higher for b,reast cancer. This was consistent with the results of (Cowppli- Bony ct al.,

2019) that found that breastfeeding reduced the risk of b,reast cancer in women whose sisterE or mothers or daughters had the disease, so b,reastfeeding naturally reduced the risk of contracting the disease by 59 percent. Familyhistory is one of the most important factors considering that cancer can be influenced by genetic disorders.

Some families nny have a higher risk of developing certain breast cancer compared to other families. For example, a woman's risk ofdeveloping breast cancer increased 1.5-3 times if her rnther or sister bad breast cancer. (Cheng, Shen, & Id, 2019) The results of the analysis using the Odds Ratio te\$ obtained the value ofOdds Ratio (OR) = 2.912 CI 950/o = I,2X)-6,511, this rneant that women who had family member who suffered from breast cancer would be 2,912 times more likely to have breast cancer than those who did nor have family members with breast cancer.

Because of the OR value (2,912)> I, family history was a risk factor for breast cancer in wornen aged I5-65 years in KendariCity iu 2018. This study was in line with research conducted by Priyalin (2013), the results of statistical analysis obtained OR : 6.93E. The results of the analysis showed that OR> I : 6,938 which can increase the rish this mea a hmily history with a risk category increased the incidence of breast cancer. Increasingly suspected family history of risk categories is a risk factor for breasi cancer.

Women of childbearing age with a family history of risk categories (there was a family history that had blood relations with respondents who had or were suffering from breast cancer) had a 6,938 times higher risk of developing breasl cancer. (Maria, Sainal, & Nyorong,2017). The risk of breast carcer showed an irrcrease aloag wilh an incrcase in the woman's age at filst pregnancy or giving birth to a first child at a relatively older age (> 35 years), whereas in nulliparous had a 30% risk of developing into cancer conpared to multiparous women.

The results of the analysis using the Odds Ratio test obtained the value ofodds Ratio (OR) = 0.5 I6 Cl 950/0: O.Ig+I .444, this meant that worn€n who given birth to their first child at age> 35 years were 0.516 times more likely to develop treast cancer coryared to women who given birth Frst child at age <35 years. Because thc OR value (0.516) <1, the age of giving birth to the first child was not a risk factorfor the incidence ofbreast cancer in women aged I5-65 years in Kendari City in 2018.

This was consistent with the results of research conducted by Briston (2008) in the United States with a cohort design tbat women who had the first pregnancy after 35 years had a 3.6 times greater risk of developing breast cancer than women whose first pregnancy was before 35 years (RR : 3,6). Women who ar€ pregnant at an older age will experience ntore rnenstrual cycles before becoming pregnant.

In each menstrual cycle, FSH (follicle- stimulating hornrone) is released by the anterior pituitary lobe which causes several primary follicles to develop in the ovary. Generally one follicle or even more than one follicle that dev€lops into de Graff follicles that produce estrogen. (Fan et at., 20lgxPalmer et aL, 2011) The use of hormonal drugs for >5 years will increase th€ risk of cancer (Rasjidi, 2010).

There is still controversy to date <mark>regarding the role of</mark> hormonal contraception in the development ofbreast cancer. However, several studies showed that hornonal conEaception plays a role in increasing the risk of breast cancer in premenopausal

women, but not in women in the post-rnenopausal period. (Banudi,2013) The results of the analysis using the Odds Ratio test obtained the value ofodds Ratio (OR) : 14.462 CI 950/0 : 3 .3972-52,656, this meanl that wonten who used horrronal contraception > 5 years would have a risk of 14,z162 tines greater breast cancer than women who used hormonal contraception <5 years. Because the OR value (14.462t> I, a his1ory of horrmnal contraceptive use was a risk factor for the incidence of breast cancer in women aged 15-65 years in Kendari City in 2018.

This research was in lioe with research conducted by (Rukrni & Handayani, 2013). The results showed that wornen who experienc€d breast cancer the most were women with a history of using hornnal contraception for 10 years totaling 16 rnore people than those without breasl cancer. The test results obtained a p-value of0.00l rneaning p-value <0.05, so that Ha was accepted and Ho was rejected.

The conclusion is that there was a relationship between the factors of honnonal contraceptive use and the 267 HSIC 2019 - The Health Science Internatronal Conference incidence of breast cancer in the Public Hospital of DadiKeluarg4 Purwokefto. The odds raio value of 7.43 fiEant that women with hornnal conEaceplion for I0 years had a 7.43 times greater risk of developing breast cancer conpared to women using hormonal contraception <10 years with 95% Ct, meaning that the research can be trusted to truth 95%.

The risk of breast cancer showed an increase along with an increase in the woman's age at first pregnancy or giving birth to a first child at a relatively older age (> 35 years), whereas in nulliparous had a 30% risk of developing into cancer conpared to multiparous women. The results of the analysis using the Odds Ratio test obtained the value ofodds Ratio (OR) :0.516 CI 950/0: 0.18+1.444, this meant that wom€n who given birth 10 their hrst child at age > 35 years were 0.516 times rnore likely to develop b,reast cancer compared to wornen who given birth first child at age <35 pars. Because the OR value (0.516) <1, the age ofgiving birth to the fint child was not a risk factorfor the inciderree ofbreast cancer in wonren aged 15-65 years in Kendari City in 2018.

This was consistent with the results of research conducted by Briston (2008) in the United Stares with a cohort design that wornen who had the first pregnancy after 35 years had a 3.6 times greater risk of developing breast carrcer tlnn wornen whose first pregnancy was before 35 years (RR : 3,6). (Heena et al., 2019) Women who are pregnant at an older age will experience rnore rnenstrual cycles before becoming pregnant- In each menstnral cycle, FSH (follicle- stimulating hormone)

is released by the anterior pituitary lobe which causes several primary follicles to devclop in the ovary.

Generally one follicle or even rnorc tluo one follicle that develops inro de Graff follicles that pmduce egrogen- (Fan et al-, 2019) A smoker is seven times morc susceptible ro the t)De of cancer, including b,reast cancer when conpared to non-smk€rs. Epidemiological investigations had found that the likelihood ofpassive smoking for breast cancer was greatsr than the risk of occurcnce in women with a history ofactive smokers (Kemenkes, 2016).

Cigarette smoke can increase the risk ofb,reast cancer because cigarette snroke contains chemicals in high concentrations that can cause breast cancer. The chemicals in tobacco smoke rsach the broast tissue and are found ir beast milk. Cigarette snroke can also have different effects on the risk of breast cancer in smokers and those who are only exposed to cigarette smoke. (Maria et al.,

2017) The results of the analysis using the Odds Ratio test obtained the value ofOdds Ratio (OR): 10.615 Table 3: Risk Factors Anallsis of Brea,st Cancer Occunmce in Women Aged 15-65 Years in Kendari City. Variablcs N o Breast Cancer Total Odds Ratio (cl95%) Case Cont rol I History of Menarche n;"ry Ilas3Sf;ffi No-Risk ii1i71'7.0361 2 History of Breastfe€ding 2211443,55t ruskYgg44II(t,54t No-ni.r z, z, ; ; a'tstl 3 History of Family !322s52,912 RrskY33oo33(r.290- No-nor ;1;;;o.srtt 4 The Use of Hormoaal Contmception Risky ii"2l"i:"f;_ 1.')152.656) No-Risk t3i1;i 5 Age of Childbirth Filst Child Rt"ky ??il;](od5rtL No-Risr i1;311',o" 6 History of Smoking 4 4 2 2 7 7 t0,615 rusky666622(3,119- N*ni"* aa11;::'est; This research was in line with research conducted. The results showed that based on the results of statistical t€sts using OR, it was known that smoking (p = 0.063.

OR = 2.00 2;950/o Cl 1.02G3.930), so that it was statistically significant between smoking and the incidence of breast carxcer- In other words, smoking is a risk factor for the incidence of breast cancer. 268 Cl 95% = 3.319-33,951, this mesnt that women who srnoked or had family members who snnked would have a risk of 10,615 times rpre likely to develop breast cancer compared to wouren who did not smoke or non-smoking family members.

Because ofthe OR value (10,615)> I, smoking history was a risk factor for breast cancer incidence in women aged 15-65 years in Kendari City in 2018. tY"o,"AN"/o Risk Factors ior Breasa Cancer Occurcnce in Women Age I5-65 Years in Kendari Ciry in 2018 Based on the results of Suciawati's research (2016), there was a significant relationship between smoking history ard <mark>the incidence of breast</mark> cancer. Based on OR, respondents who smoked had a 2.5

times greater chance of developing breast cancer compared to respondents who did not snroke. This was consistent with Maria's research (2017) that smoking was a risk factor for the incidence of breast cancer. Furthermore according to lesearch by Hosseinzadeh et al in 2014 showed that there was a positive relationship between active and passive smokers against breast cancer.

(Ayu et al., 2016). 4 CONCLUSIONS History of msnarche was a dsk factor for b(east cancer incidence in women aged 15-65 years in Kcdari City in 2018. Breastfeeding history was a risk factor for b,reast carrcer incidence in woren aged 15-65 years in Kendari City in 2018. Family history was a risk factor for breast cancer events in women aged 15-65 yram in Kerdari City in 2018.

History of horrmnal contraceptiye use was a rL* frctor for keast cancer incidence in women aged 15-65 years in Kendari City in 2018. Ttx age of first childbirth r*"s mt a risk factor for breast cancer inciderce in women ags 15 -65),ea\$ in Kendari City in 2018, Smoking history was a risk factor for the occl.rrr€ncE of keast cacsr in wonren aged 15-65 years in Kendai City in 2018. REFERENCES Ayu, D., Setiowati, I., Tanngo, E. II., & So€bijanto, R. I. (2016).

Hubungan antara Pemakaiaa KB Hormotral &ogao Kejadian Kaoker Payudara di Poli Onkologi Satu Atap RSUD Dr. Soetomo, Februari-April 2015. Iddon4ian Jounal of Canc*. 10\larary-Much), 'll* t'l. Banudi, L. (2013). Gizi Kesehatan Reproduksi. Jakartal. EC,C. Cheng, W.. Shea, X., & Id, M. X. (2019). Decreased bre4st cancer-specilic nortalit, risk in patie4I, wilh .t hirtory of thyloid cancer. I 13. bltps//doi-org/ 1 0. 1 37 1/jourDal-pooe.022 1 093 CorppliBony, A., Tr6tarrg 8., Marrer, E., Defossez, C., Daubisse-Marliac, L., Coureau, G., FRANCM network. (2019).

Conrpliance with clinical guidelines for brcast cancer maragement: A population-based study ofquality-of-care indicators in France. PloS One,)4(10), d22427s. https://doi.org/10.1371ljownal.pone.0224275 Fan, M., Xia, P., Liu,8., Zhang, L., Wang, Y., cao, X., & Li, L. (2019). Tumour hderogeneity rcvealed by unsqervised decompocition of dynamic cootrast- enhaoce.d

rtragtretic resoflance inraging is associated with undsrlying gene expr€ssior patterns and poor survival in breast cancer palisols. Breast Cancer Research: BCR, 21(I\, tl2. htrys://doi.org/10.1 186/s t3058-019- I 199-8 Heena, H., Durrani, S., Riaz,

M., Alfalryad, I., Tabasim, R., Parvez, G., & Abu-shaheen, A. (2019). Knowledge , attitudes , atd practices related to breast caflcer screening among.female health care professionols: a cross sectional study.l

II. Kemenkes. (2016). Aulan Peduli Kanker. lakarta. Ma, H., Wang, Y., Sullivan-Halley, J., Weiss, L., Marchbanks, P. A.. Spirtas, R., ... Bemstein, L. (2010). Use of four biornarkers to evaluate the risk of breast cancer subt)pe6 in the wo\$en's contraceptive and reproductive experiences study- Cancer Research, 7q2), 575-587. htQ6://doi.orgll0.1158/0008- 5472.CAN-09-3460 Mari4 L, Sainal, A., & Nyo.oo& M. (2017). Risiko Gaya Hidup terhadop Kejadian Kanker Payudara pada Wanita. 1it2), 157-166.

hnps://doi.orgll 0.30597/mlani-v I 3i2. I 988 Mulia" S., & Conference, L (2017). Advances in Heohh Scietce Research, volume 6 2nd Sari Malia Interna,ionat Conference on Heahh and Sciences (SMICES 2017). qsnic}a), t-11. Nnrsalam. (2013). Metodologi Penelitian Ilmu Keperawatan : Pendekatan &ak's- Jakarta: Salemba Medika. Palrner, J. R, Boggg D. A., Wise, L- A., Ambrosore, C. 8., Adams{arpbell, L.

L., & Ro6€nber& L. (2011). Parity arrd Ia.{ation irl relation to estrog€n r€ceptor negative brEast caoc€i in Africal Aoerican women. Cancgr Epidemiologt Biomarkers and Prevention, 2 0(9\, 1 883- 1891. ht\$6./idoi,orgi I0. I 158/1055-9965.EP1-I 14465 Phipps, A. I., Chlcbowski, R. T., Prentice, R., McTicrnan, A., Wactawski-Wende, J., Kull€r, L. H., Li, C. I.

(2011)- R€productive history and oral contraceptive use in relation to risk of triple-negative breast cancer- Journal o{ the National Cancet Instilute, 103(6), 470411, httpsl/doi.org/ 10. 1093/jncvdjr030 Rukmi, D. K., & Haodayani, D. (2013). Faktor tusiko Kanker Payudara Waoita. KESMAS - Jurnal Kcsehatan Masyaralat , 8(2). https://doi.org/I0.I52 ketnas.v8I2.2635 Suardita I. W., ChrisDa*ati, & Aguslina. D. M- (2016). Faktor-faktor resiko pencetus prevalensi kanker paytdara.

Jtrnal Keperawwt/rn Suaka Insan, I (2), I -I 4. https://doi.org{Imwelt-Zustand Nr. 0728 Tutuncuoglu, 8., & KrogaJI,N.I. (2019). Mapping gehetit interacrtons i caicer: o road to ratiogl combination therapies.4,I 12. Wahyuni, 8., Chrisnawari, & Saotoso, R. B. (n.d.)- Rinqtat Menyusui , Riwayat Menarche , Riwayot. 269 HSIC 2019 - The Health Science International Conference Wyad, K D., Jenkins, S. M., Plwalq M. F., Poot, M. R. V.,

& Pruthi, S. (2019). I personalizd , v,eb-based breost L.dncer da ision ,na*ing opplication : a pre-post flrvey. 7, t-t|.

<1% -

https://www.beautifulabc.com/en/family-history?preview_id=1&preview_hash=28 428c3b39d81686e2495e6a475f4146%2FUS%2F2020%2F2020%2FUS

<1% -

https://cmuj.cmu.ac.th/uploads/journal_list_index/Final_CMUJNS_20(1)_2021019.p df

<1% - https://www.sciencedirect.com/science/article/pii/S0006291X20320623 <1% -

https://noelbrewer.web.unc.edu/wp-content/uploads/sites/16987/2018/11/2012_ Denslow.pdf

<1% - http://www.fao.org/3/w3241e/w3241e03.htm

<1% -

https://www.researchgate.net/post/Which-statistical-test-is-used-to-analyse-caus e-and-effect-relationship-between-two-variables-independent-of-any-groupingvariables

<1% -

https://www.researchgate.net/publication/260646021_Sample_size_and_power_ca lculations_in_Mendelian_randomization_with_a_single_instrumental_variable_and_ a_binary_outcome

<1% -

http://repository.usu.ac.id/bitstream/handle/123456789/70949/Similarity.pdf?seq uence=3&isAllowed=y

<1% - https://www.sciencedirect.com/science/article/pii/0029784496002487 <1% -

https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(16)30956-4/fullt ext

<1% - https://pt.scribd.com/document/205771818/132370119-Gynaecology

<1% - https://quizlet.com/33393171/breast-cancer-flash-cards/

<1% - https://www.womenshealth.gov/menstrual-cycle/your-menstrual-cycle/

<1% - https://emedicine.medscape.com/article/1697353-overview

<1% - https://www.nature.com/articles/s41598-019-53746-6

<1% -

https://www.cdc.gov/flu/spotlights/2017-2018/vaccine-reduces-risk-severe-illness. htm

<1% - https://core.ac.uk/download/pdf/4004846.pdf

<1% -

https://www.cancer.ca/en/cancer-information/cancer-type/breast/risks/?region=b c

<1% - https://www.nejm.org/doi/full/10.1056/NEJM199412223312501

<1% -

https://observatory.kirklees.gov.uk/jsna/health-and-wellbeing-behaviours/tobacc o-alcohol-drug-use

<1% -

https://acsjournals.onlinelibrary.wiley.com/doi/full/10.1002/%28SICI%291097-014 2%2819990615%2985%3A12%3C2623%3A%3AAID-CNCR19%3E3.0.CO%3B2-O <1% - http://ufdc.ufl.edu/UFE0024328/00001

<1% -

https://www.breastcancer.org/symptoms/understand_bc/risk/understanding <1% - https://www.sciencedirect.com/science/article/pii/S1740676512000156 <1% -

https://www.catholicnewsagency.com/index.php/news/28718/study-finds-contrac eptives-boost-breast-cancer-risk

<1% - https://www.sciencedirect.com/science/article/pii/S1877117317301163 <1% -

https://biology.reachingfordreams.com/biology/endocrine-system/12-anterior-an d-posterior-pituitary-gland-hormones-and-their-functions <1% -

https://www.cambridge.org/core/journals/british-journal-of-nutrition/article/speci fic-carotenoid-intake-is-inversely-associated-with-the-risk-of-breast-cancer-amo ng-chinese-women/723A9C7B8E5E8E107313429C572C6C91

<1% - http://eprints.poltekkesjogja.ac.id/223/1/14SRI%20WIDATI.pdf

<1% - https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4658841/

<1% - https://core.ac.uk/download/pdf/46171871.pdf

<1% -

https://healthy.net/2000/12/06/the-prevention-and-complementary-treatment-of -breast-cancer/

<1% - https://cancerres.aacrjournals.org/content/80/9/1893

<1% -

https://penerbitsalemba.com/buku/08-0249-metodologi-penelitian-ilmu-kepera watanpendekatan-praktis-e4