

Comparison of the Reason for Carrying Out the Preventive Exam for Cervical Cancer before and during the COVID-19 Pandemic

KARIANE OMENA RAMOS CAVALCANTE

*Federal University of Alagoas. Postgraduate Program in Nursing.
Maceio, Alagoas, Brazil*

AMUZZA AYLLA PEREIRA DOS SANTOS

*Federal University of Alagoas. Postgraduate Program in Nursing
Maceio, Alagoas, Brazil*

NÚBIA VANESSA DA SILVA TAVARES

*Federal University of Alagoas. Postgraduate Program in Nursing
Maceio, Alagoas, Brazil*

JOYCE DOS SANTOS BARROS SILVA

*Federal University of Alagoas. Postgraduate Program in Nursing
Maceio, Alagoas, Brazil*

JOSÉ AUGUSTINHO MENDES SANTOS

University of Brasilia. Postgraduate Program in Health Sciences. Brasilia, Federal District, Brazil

NATHALIA LIMA DA SILVA

*Federal University of Alagoas. Postgraduate Program in Nursing
Maceio, Alagoas, Brazil*

MARIANA MARIA PEREIRA CINTRA FARIAS CARVALHO

*Federal University of Alagoas. Postgraduate Program in Nursing
Maceio, Alagoas, Brazil*

WANDERLEI BARBOSA DOS SANTOS

Federal University of Alagoas. Postgraduate Program in Nursing. Maceio, Alagoas, Brazil

Abstract

Cervical cancer (CCU) is a disease with great potential for prevention and cure when diagnosed early. Thus, the Pap smear was recommended as a prevention method that should be performed periodically by women aged 25 to 59 years or from the beginning of their sexual life. It is a problem of worldwide relevance and is the third type of cancer that primarily affects women. In 2022, 16,710 new cases were estimated, representing a risk of 15.38 points per 100,000 women. It aims to compare the reason for carrying out the preventive exam for CCU before and during the covid-19 pandemic. This is a quantitative study, with a descriptive, retrospective and ecological approach, conducted from the Cancer Information System - SISCAN (cervix and breast), in the Health Information base (TABNET) of the Department of Information Technology of Health Service (DATASUS). The data came from information released by the state of Alagoas in 2019 and 2020, which were collected in August 2022. The tracking (preventive exam) significantly reduced the indices that pointed out the covid 19 pandemic and all the consequences surrounding it as the cause of this decrease. Information from cancer records is indispensable in coping with cervical cancer.

Kariane Omena Ramos Cavalcante, Amuzza Aylla Pereira dos Santos, Núbia Vanessa da Silva Tavares, Joyce dos Santos Barros Silva, José Augustinho Mendes Santos, Nathalia Lima da Silva, Mariana Maria Pereira Cintra Farias Carvalho, Wanderlei Barbosa dos Santos– **Comparison of the Reason for Carrying Out the Preventive Exam for Cervical Cancer before and during the COVID-19 Pandemic**

Integrating treatment strategies should be considered to improve cervical cancer mortality rates in the State of Alagoas.

Keywords: Nursing; Cytopathological examination; COVID-19; Prevention; Cancer.

INTRODUCTION

Cervical cancer (CCU) is a disease with great potential for prevention and cure when diagnosed early. It is a problem of worldwide relevance and is the third type of cancer that primarily affects women; for the year 2022, 16,710 new cases were estimated, which represents a risk considered to be 15.38 cases per 100,000 women (INSTITUTO NACIONAL DE CÂNCER, 2022).

The number of new cases of cervical cancer expected for the country, for each year of the triennium 2020-2022, will be 16,710, with an estimated risk of 16.35 cases per 100,000 women (SANTOS; GOMES, 2022).

The main risk factor for this cancer is the Human Papilloma Virus (HPV). Still, in addition to this, Other associated factors include the diversity of sexual partners, the anticipation of sexual life, smoking, multiparity, nutritional deficiencies, immunity, and prolonged use of oral contraceptives (CARVALHO et al., 2017).

CCU is a tumor that develops from changes in the cervix inside the vagina. These changes are called precursor lesions; most can be cured if discovered early. CC is caused by sexually acquired infection with certain types of HPV, especially HPV-16 and HPV-18, which are responsible for about 70% of cervical cancers. Precursor lesions can occur and, when not identified, can progress to cancer, especially in the cervix (SILVA et al., 2022).

Strategies for the early detection of cancer are early diagnosis (examining people with signs and symptoms of the disease) and screening (application of an exam in an asymptomatic, apparently healthy population, to identify lesions suggestive of cancer and referee for investigation and treatment) (INSTITUTO NACIONAL DE CÂNCER, 2022).

It is healthy people, who may be at some risk of contracting the disease, who will be screened. The method of tracking CC and its precursor lesions is the cytopathological exam, which can be performed in the basic unit, by health professionals, who know the technique, the frequency, and the target population, guiding and forwarding for confirmation of the diagnosis and treatment, whenever necessary, according to the results of the exams, ensuring its follow-up (SANTOS; GOMES, 2022).

The CC screening method in Brazil is the cytopathological exam (Pap smear), offered to women between 25 and 64 years who have already started their sexual life. The recommendation for screening is to repeat the Pap smear every three years, after two consecutive regular tests performed one year apart (INSTITUTO NACIONAL DE CÂNCER, 2022).

The exam has been offered in family planning, prenatal and gynecological consultations, in health services, especially in the Family Health Strategy (ESF).

Kariane Omena Ramos Cavalcante, Amuzza Aylla Pereira dos Santos, Núbia Vanessa da Silva Tavares, Joyce dos Santos Barros Silva, José Augustinho Mendes Santos, Nathalia Lima da Silva, Mariana Maria Pereira Cintra Farias Carvalho, Wanderlei Barbosa dos Santos– **Comparison of the Reason for Carrying Out the Preventive Exam for Cervical Cancer before and during the COVID-19 Pandemic**

Cervical cancer prevention practices (PCCU) consist of adherence to the Pap smear and vaccination against HPV. The vaccine should be given to girls aged 9 to 14 years and boys aged 11 to 14 years. Low adherence to vaccination and examination represents a challenge to public health and contributes negatively to reducing survival indicators associated with this type of cancer (SANTOS; GOMES, 2022).

Tests for cancer investigation (colposcopy and biopsy) confirm the diagnosis. The treatment consists of oncological surgeries, radiotherapy, chemotherapy and brachytherapy. Rehabilitation encompasses multidisciplinary action aimed at restoring physical-organic functionalities damaged by the disease. The control of the CCU is conditioned by socioeconomic and cultural inequalities and by the degree of performance of the health system, and its performance is composed of access to the health service (LOPES; RIBEIRO, 2019).

Despite the widespread importance of Pap smear through strategies created by the government, there are still difficulties regarding the adhesion of women (CARVALHO et al., 2017). Some factors such as low levels of education, low family income, use of oral contraceptives, absence of gynecological problems, feelings such as shame or fear regarding the exam, difficulty in accessing medical care, and lack of information about the importance of the exam may be associated—low adherence to the preventive examination (SANTOS; GOMES, 2022).

Given the above, the present study asks the following question: Was there an increase in the search for the preventive exam for cervical cancer at the time of the covid-19 pandemic, if so, what is the reason? To answer the question, the objective emerged: to compare the reason for carrying out the preventive exam for cervical cancer before and during the covid-19 pandemic.

METHOD

The present research is a quantitative study, with a descriptive, retrospective and ecological approach, carried out from the Cancer Information System - SISCAN (cervix and breast), in the Health Information base (TABNET) of the Department of Informatics of the Unified Health System (DATASUS), made available by the Ministry of Health, at the electronic address (<http://www.datasus.gov.br>). The data came from information released by the state of Alagoas in 2019 and 2020, which were collected in August 2022.

The study sample consisted of all cases of notification of cervical cancer preventive exams in the state of Alagoas, in the initial period of the Covid-19 pandemic, to obtain an analysis focused on what makes prevention of this significant pathology.

To establish a comparison and discussion about the data collected in the face of the pandemic context, the year 2019 was also selected for analysis since this was the year before the emergence of the Covid-19 pandemic and also considering the importance of completeness of the data to carry out a proper investigation, it was decided to analyze the data available up to the year 2020, as it was the year of the beginning of the pandemic, where changes in the routine of life and the provision of services had more significant impacts.

Kariane Omena Ramos Cavalcante, Amuzza Aylla Pereira dos Santos, Núbia Vanessa da Silva Tavares, Joyce dos Santos Barros Silva, José Augustinho Mendes Santos, Nathalia Lima da Silva, Mariana Maria Pereira Cintra Farias Carvalho, Wanderlei Barbosa dos Santos– **Comparison of the Reason for Carrying Out the Preventive Exam for Cervical Cancer before and during the COVID-19 Pandemic**

Regarding the variables of interest for this study, the reason for performing cervical cancer screening in the cities of the State of Alagoas was considered. Data processing was done through the TAB for Windows-TabWin (DATASUS). It is an application that allows tabulating information of different types in the same environment. After collecting the report, the data were transferred to a Microsoft Excel spreadsheet, and then the absolute and relative frequencies were performed and analyzed.

In the present study, all notifications found were considered based on the search performed with the following filters or active selections, as the site Active Selections names: UF occurrence, municipality of event, the reason for the exam, exam performed, and the year of occurrence.

Regarding ethical aspects, because it is a study where the data are aggregated without individual identification of the participants and were collected on a public domain platform, this research did not need to be submitted to the Research Ethics Committee according to Resolutions 466/2012 and 510/16 of the National Health Council, being approved by the Research Ethics Committee of the institution involved.

RESULTS

Even with the improvement in national coverage for cytology, Brazil still has high mortality rates from the neoplasm, and most cases are detected at an advanced stage. The inefficiency of screening programs could explain this fact since they are not being able to reach women at risk, those who have never undergone the exam or performed it with inadequate frequency, in addition to ensuring follow-up and adequate treatment for detected cases (GOMES et al., 2017).

Given this, Table 1 demonstrates the reasons that women sought to undergo the preventive exam for the CCU, separated by the years 2019 and 2020, when the covid 19 pandemic began and care and prevention searches were hampered. Where screening is indicated as a preventive examination; repetition refers to the analysis performed improperly, due to loss of sample or inadequate sampling, broken blade, or other reason that it was not possible to read the sample; the segment is the exam that presented alterations and needed to be repeated or given continuity in the treatment with another more specific exam.

Table 1 - Reason for carrying out the preventive examination for Cervical Cancer in the cities of the State of Alagoas.

MUNICIPALITY OF RESIDENCE	2019			2020		
	Tracking	Repetition (Altered Sample)	Segment	Tracking	Repetition (Altered Sample)	Segment
Água Branca	1.317	1	2	789	0	1
Anadia	754	0	0	406	0	0
Arapiraca	13.952	7	14	4.649	8	8
Atalaia	1.736	1	2	854	1	0
Barra De Santo Antônio	929	1	0	512	0	0
Barra De São Miguel	441	2	0	249	0	0
Batalha	951	0	6	409	0	0
Belém	452	1	3	265	0	3
Belo Monte	296	0	0	236	0	0
Boca Da Mata	1.490	1	3	891	0	1
Branquinha	785	0	2	287	0	1
Cacimbinhas	490	0	2	286	0	0

Kariane Omena Ramos Cavalcante, Amuzza Aylla Pereira dos Santos, Núbia Vanessa da Silva Tavares, Joyce dos Santos Barros Silva, José Augustinho Mendes Santos, Nathalia Lima da Silva, Mariana Maria Pereira Cintra Farias Carvalho, Wanderlei Barbosa dos Santos– **Comparison of the Reason for Carrying Out the Preventive Exam for Cervical Cancer before and during the COVID-19 Pandemic**

MUNICIPALITY OF RESIDENCE	2019			2020		
	Tracking	Repetition (Altered Sample)	Segment	Tracking	Repetition (Altered Sample)	Segment
Cajueiro	1.219	0	1	625	0	0
Campestre	54	0	6	28	0	1
Campo Alegre	4.091	0	5	2.421	1	0
Campo Grande	347	0	0	167	0	1
Canapi	1.040	1	1	955	0	1
Capela	1.262	0	0	676	5	0
Carneiros	304	0	0	95	0	0
Chã Preta	189	1	0	75	0	0
Coité Do Nóia	647	0	0	686	0	0
Colônia Leopoldina	966	1	3	677	0	5
Coqueiro Seco	537	0	0	315	0	0
Coruripe	4.289	1	1	1.672	0	2
Craibas	818	1	37	642	0	25
Delmiro Gouveia	2.373	3	3	1.085	0	1
Dois Riachos	691	0	0	257	0	0
Estrela De Alagoas	384	0	0	539	0	0
Feira Grande	1.283	0	0	463	1	1
Feliz Deserto	411	1	0	114	0	0
Flexeiras	894	0	0	470	0	1
Girau Do Ponciano	565	0	1	152	0	1
Ibateguara	451	1	2	239	0	0
Igaci	1.186	0	0	579	0	0
Igreja Nova	2.768	0	0	2.078	1	0
Inhapi	547	0	2	359	1	0
Jacaré Dos Homens	412	2	0	230	0	0
Jacuípe	33	0	1	13	0	1
Japaratinga	280	1	2	68	0	1
Jaramataia	276	0	0	108	0	0
Jequiá Da Praia	2.022	0	1	381	1	2
Joaquim Gomes	1.344	0	0	811	0	0
Jundiá	83	0	0	29	0	0
Junqueiro	1.401	0	0	1.521	0	2
Lagoa Da Canoa	1.298	4	0	728	0	2
Limoeiro De Anadia	428	0	0	278	0	0
Maceió	41.552	50	79	23.824	42	35
Major Isidoro	946	0	2	396	0	0
Maragogi	2.274	21	24	1.671	2	8
Maravilha	561	0	0	328	0	0
Marechal Deodoro	3.054	2	2	1.433	0	1
Maribondo	492	0	0	304	0	0
Mar Vermelho	139	0	0	107	0	0
Mata Grande	1.205	0	1	862	0	0
Matriz De Camaragibe	1.159	0	2	492	0	0
Messias	1.262	2	0	677	0	1
Minador Do Negrão	170	0	0	154	0	0
Monteirópolis	405	0	1	189	0	0
Murici	475	9	1	70	0	1
Novo Lino	595	0	5	194	0	12
Olho D'água Das Flores	1.592	1	1	992	0	1
Olho D'água Do Casado	519	4	9	197	0	2
Olho D'água Grande	401	0	0	94	0	0
Oliveira	742	3	1	181	0	0
Ouro Branco	277	4	31	95	0	2
Palestina	238	1	2	134	0	0
Palmeira Dos Índios	3.370	0	4	2.062	0	0
Pão De Açúcar	1.644	0	3	835	1	1
Pariconha	991	0	0	574	0	0
Paripueira	666	0	0	341	0	0
Passo De Camaragibe	547	1	0	253	0	0
Paulo Jacinto	702	0	2	545	0	1
Penedo	7.249	2	3	2.838	0	0
Piacaçu	1.459	33	0	1.018	0	0
Pilar	2.584	0	3	1.701	0	2
Pindoba	367	0	0	97	0	0

Kariane Omena Ramos Cavalcante, Amuzza Aylla Pereira dos Santos, Núbia Vanessa da Silva Tavares, Joyce dos Santos Barros Silva, José Augustinho Mendes Santos, Nathalia Lima da Silva, Mariana Maria Pereira Cintra Farias Carvalho, Wanderlei Barbosa dos Santos– **Comparison of the Reason for Carrying Out the Preventive Exam for Cervical Cancer before and during the COVID-19 Pandemic**

MUNICIPALITY OF RESIDENCE	2019			2020		
	Tracking	Repetition (Altered Sample)	Segment	Tracking	Repetition (Altered Sample)	Segment
Piranhas	1.155	0	3	334	1	3
Poço Das Trincheiras	628	1	2	229	0	0
Porto Calvo	2.141	0	3	980	0	1
Porto De Pedras	527	1	0	288	0	1
Porto Real Do Colégio	88	0	1	39	0	0
Quebrangulo	791	0	0	371	0	0
Rio Largo	4.332	0	5	2.502	1	0
Roteiro	274	0	0	90	0	0
Santa Luzia Do Norte	577	6	6	315	1	1
Santana Do Ipanema	4.459	2	4	1.938	0	1
Santana Do Mundaú	766	0	1	328	0	1
São Brás	234	0	0	62	0	0
São José Da Laje	156	0	3	180	0	0
São José Da Tapera	1.722	2	14	863	0	4
São Luís Do Quitunde	1.552	1	1	933	0	0
São Miguel Dos Campos	4.135	2	2	1.885	0	2
São Miguel Dos Milagres	241	37	1	176	23	1
São Sebastião	3.549	2	0	1.598	2	0
Satuba	715	2	1	270	0	0
Senador Rui Palmeira	987	1	0	510	1	1
Tanque D'arca	184	0	0	212	0	0
Taquarana	713	1	0	355	0	1
Teotônio Vilela	5.480	0	5	4.524	3	3
Traipu	674	0	0	293	0	0
União Dos Palmares	3.495	2	0	2.300	0	2
Viçosa	2.337	2	2	948	0	1
Total	178.035	226	330	94.550	96	151

The most active professional of the multi-professional team in the search for cancer screening is the nurse, as he/she has the function of providing information to the woman, exam information and creating spaces for reception and privacy in the nursing consultation. (AMARAL; GONÇALVES; SILVEIRA, 2017).

With this, we present a comparison of the number of CCU preventive exams carried out in the years referring to 2019 and 2020, to visualize the significant reduction that we point out to the covid 19 pandemic and all the consequences surrounding the cause of this decrease.

Graph 1 - Comparison between 2019 and 2020 on the reasons for carrying out the preventive examination for cervical cancer.

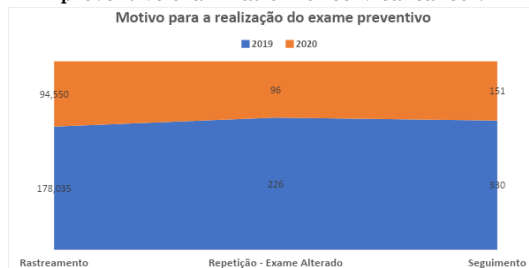


GRAFICO: Reason for carrying out the preventive examination Tracking, Repetition (Altered sample), Segment

DISCUSSION

Persistent Human Papillomavirus (HPV) infection causes cervical cancer, making this infection responsible for about 70% of cervical cancers. Its primary prevention, therefore, includes using condoms and HPV vaccination accompanied by health promotion actions. Women from 25 to 64 years old, through the collection of the Pap smear, perform early detection (LOPES; RIBEIRO, 2019).

According to INCA (2022), every woman between 25 and 64 years old and who has already started sexual life must undergo a periodic preventive examination. After two consecutive exams (with an interval of one year), presenting results without alterations, the prevention can be carried out every three years, according to the regulations.

Tumor patients have a higher risk of contracting Covid-19 than non-tumor patients (SILVA et al., 2020). The remaining symptoms are similar to those of non-tumor patients: myalgia and fatigue. The older the age, the greater the risk of serious clinical events and the worse the prognosis (RODRIGO; VIEIRA; SANTOS, 2020). Therefore, during the pandemic, COVID-19 patients who have recently received radiation therapy, chemotherapy or surgery should pay more attention to changes in the disease and adjust their treatment plan in time. People with cancer who contracted Covid-19 have 3.5 times greater mechanical ventilation, entry, or death in the ICU than patients without cancer. The severity of the risk of infection by Covid-19 in cancer patients is twice as high compared to the population that does not have it (SILVA et al., 2020).

The groups isolated by the coronavirus target biopsychosocial damage, such as anxiety, stress, and decreased sleep quality. The distortion of real risk causes people to fear disease, distress, anger, insomnia, and exacerbation of pre-existing symptoms. These long-term factors can trigger depression, alcohol, tobacco compulsion, and post-traumatic stress, among others (FICANHA et al., 2020).

Quarantine comprises one of the most effective measures to contain infectious diseases. It consists of a method of isolating healthy individuals who may be exposed to the disease during the maximum incubation period and may be individual or in groups, on a mandatory or voluntary basis, with restrictions in the home or designated facilities in which there is continuous monitoring of individuals (FICANHA et al., 2020). Consultations with medical specialties were suspended, as were exams, except for urgent ones (VIEGAS et al., 2020).

The role of nurses in health promotion and disease prevention is essential, given the application of healthy behaviors, costs, and lifestyles, as soon as it has repercussions on health-promoting activities performed by patients (AOYAMA, 2019).

Due to these conditions, we assume that women are more susceptible to cervical cancer, as it is difficult to access health services, especially during a pandemic. Therefore, prevention is crucial, being the focus of this research project presented.

CONCLUSION

This study reveals that it is necessary to increase the coverage of cervical cytopathology in the State of Alagoas in critical times, as the period of the covid 19 pandemic has

Kariane Omena Ramos Cavalcante, Amuzza Aylla Pereira dos Santos, Núbia Vanessa da Silva Tavares, Joyce dos Santos Barros Silva, José Augustinho Mendes Santos, Nathalia Lima da Silva, Mariana Maria Pereira Cintra Farias Carvalho, Wanderlei Barbosa dos Santos– **Comparison of the Reason for Carrying Out the Preventive Exam for Cervical Cancer before and during the COVID-19 Pandemic**

been. The importance of this examination, and convince women (particularly those at greater risk of cervical cancer) to carry it out periodically, offering health services to guarantee their access to prevention and screening tools, security in the realization, and access to the community.

It is up to health professionals to take the opportunity to collect the exam at the time of consultation and encourage women to return to subsequent consultations. It is also suggested that they verify the percentage of women who need to repeat the cytopathological examination, even in critical times, to investigate and treat the observed changes. With these measures, we contribute to reducing mortality from a relatively frequent and almost always preventable disease, cervical cancer.

It is also essential to develop intersectoral public policies that aim to improve the conditions of the health system and the offer and access of the population to preventive exams, always aiming at comprehensive care and increasing the quality of life for women.

REFERENCES

1. Amaral M.S, Gonçalves AG, Silveira LCG. Prevenção do câncer de colo de útero: a atuação do profissional enfermeiro nas unidades básicas de saúde. *Revista Científica FacMais*[Internet].2017.[Acesso em 6 de fev. de 2020];3(1):1-27. <https://revistacientifica.facmais.com.br/wp-content/uploads/2017/04/8-PREVEN%C3%87%C3%83O-DO-C%C3%82NCER-DE-COLO-DE-%C3%9ATERO-A-ATUA%C3%87%C3%83O-DO-PROFISSIONAL-ENFERMEIRO-NAS-UNIDADES-B%C3%81SICAS-DE-SA%C3%9ADE.pdf>.
2. Aoyama EA, Pimentel AS, Andrade JS, Daniel WV, Souza RAG, Lemos LR. Assistência de enfermagem na prevenção do câncer de colo do útero. *Braz. J. Hea. Rev. Internet*.2019 [Acesso em 6 de out. de 2020];2(1):162-170.Disponível em: <https://www.brazilianjournals.com/index.php/BJHR/article/view/877/760#>.
3. Brasil. Inca:Instituto Nacional de Câncer José Alencar Gomes da Silva [Internet]. Dados e números: incidência 2022[Internet].2022[Acesso em 3 de ago de 2022].Disponível em:[https://www.inca.gov.br/controle-do-cancer-do-colo-do-uterio/dados-e-numeros/incidencia#:~:text=No%20Brasil%2C%20exclu%C3%ADdos%20os%20de,mulheres%20\(INCA%2C%2021\)](https://www.inca.gov.br/controle-do-cancer-do-colo-do-uterio/dados-e-numeros/incidencia#:~:text=No%20Brasil%2C%20exclu%C3%ADdos%20os%20de,mulheres%20(INCA%2C%2021)).
4. Brasil.Inca:Instituto Nacional de Câncer José Alencar Gomes da Silva [Internet]. 2022 [Acesso em 5 de ago de 2022]. Disponível em: <<https://www.gov.br/inca/pt-br/assuntos/cancer/tipos/colo-do-uterio>>.
5. Carvalho RS, Nunes RMV, Oliveira JD, Davim RMB, Rodrigues ESRC, Menezes PCM. Perfil preventivo do câncer de colo uterino em trabalhadoras da enfermagem. *Rev. enferm UFPE on line* [Internet]. 2017 [Acesso em 3 ago de 2022]; 11(6):2257-2263. Disponível em: <https://pesquisa.bvsalud.org/porta/resource/pt/biblio-1032142#:~:text=para%20o%20perfil%20preventivo%20do%20c%C3%A2ncer%20de%20colo,edu%C3%A7%C3%A3o%2C%20incid%C3%A2ncia%20e%20mortalidade%20por%20esse%20tipo%20de%20c%C3%A2ncer>.
6. Ficanha EE, Silva EV, Rocha VMP, Badke MR, Cogo SB, Silva EV et al. Aspectos biopsicossociais relacionados ao isolamento social durante uma pandemia de Covid-19: uma revisão integrativa. *Pesquisa, Sociedade e Desenvolvimento* [Internet].2020 [Acesso em 6 de out. de 2020];9(8):1-23 . Disponível em: <<https://www.rsdjournal.org/index.php/rsd/article/view/6410/5868>>.
7. Gomes LCS, Rodrigues TS, Goiano PDOL, Lopes JSP.Conhecimento de mulheres sobre a prevenção do câncer de colo do útero: uma revisão integrativa. *Revista uninga review* [Internet]. 2017[Acesso em 6 de out. de 2020];30(2):44-51.Disponível em: <<http://revista.uninga.br/index.php/uningareviews/article/view/2016/1609>>.
8. Lopes VAS, Ribeiro JM. Fatores limitadores e facilitadores para o controle do câncer de colo de útero: uma revisão de literatura. *Ciênc. saúde coletiva*[Internet].2019[Acesso em 3 de ago de 2022]; 24 (9): 3431-3442.Disponível em: <<https://doi.org/10.1590/1413-81232018249.32592017>>.
9. Rodrigues AB, Vieira AA, Santos SGC. Medidas de Prevenção e Manejo Adequado do Paciente Oncológico em Tempos de Covid-19. *Revista Brasileira de Cancerologia*[Internet]. 2020[Acesso em 6 de out. de 2020];66:1-10.Disponível em: <https://rbc.inca.gov.br/revista/index.php/revista/article/view/1125/687>.
10. Santos JN, Gomes RS. Sentidos e Percepções das Mulheres acerca das Práticas Preventivas do Câncer do Colo do Útero: Revisão Integrativa da Literatura. *Revista Brasileira de Cancerologia* [Internet]. 2022 [Acesso em 3 ago de 2022];68(2):1-9. Disponível em: [Miolo_RBC_68-2.indd \(bvsalud.org\)](https://doi.org/10.1590/1413-8123202118249.32592017).

Kariane Omena Ramos Cavalcante, Amuzza Aylla Pereira dos Santos, Núbia Vanessa da Silva Tavares, Joyce dos Santos Barros Silva, José Augustinho Mendes Santos, Nathalia Lima da Silva, Mariana Maria Pereira Cintra Farias Carvalho, Wanderlei Barbosa dos Santos– **Comparison of the Reason for Carrying Out the Preventive Exam for Cervical Cancer before and during the COVID-19 Pandemic**

11. Silva Filho PSP, Costa REAR, Santos MBL, Lima SPN, Silva LA, Freitas AS et al. (2020). Gerenciamento de pacientes com câncer durante a pandemia do COVID 19. Research Society and Development[Internet].2020[Acesso em 6 de out. de 2020]; 9(7):1-17 Disponível em: <http://dx.doi.org/10.33448/rsd-v9i7.4609>.
12. Silva LG, Andrade GO, Leonhardt V, Bezerra MLR. A importância da prevenção do câncer do colo do útero: uma revisão integrativa. Pesquisa, Sociedade e Desenvolvimento, [Internet.], 2021 [Acesso em 3 de ago de 2022];10(15):1-9. Disponível em <<https://rsdjournal.org/index.php/rsd/article/view/23334>>.
13. Viegas AC, Farias CR, Arrieira ICO, Pinto RO, Maagh SB, Fernandes VP. Cuidado paliativo de pacientes com condições crônicas durante a pandemia Coronavírus 2019. J. nurs. health [Internet].2020 [Acesso em 6 de out. de 2020];10:1-12. Disponível em: <<https://periodicos.ufpel.edu.br/ojs2/index.php/enfermagem/article/view/19118/11696>>.