# Cancer patients during pregnancy and the feelings experienced

## Pacientes oncológicos na gestação e os sentimentos vivenciados

## Pacientes con cáncer durante el embarazo y los sentimientos experimentados

Edgar Lima Macedo<sup>1</sup>, Laura Pagnan Couto<sup>2</sup>, Magali Hiromi Takashi<sup>3</sup>

**How to cite:** Macedo EL, Couto LP, Takashi MH. Cancer patients during pregnancy and the feelings experienced. REVISA. 2022; 11(3): 295-301. Doi: <a href="https://doi.org/10.36239/revisa.v11.n3.p295a301">https://doi.org/10.36239/revisa.v11.n3.p295a301</a>



#### **RESUMO**

Objetivo: Ações na terapia oncológica durante a gestação, e respectivamente seus sentimentos de medos vivenciados. Método: Revisão integrativa realizada de agosto a setembro de 2021 na Biblioteca Virtual em Saúde. Foram utilizadas as seguintes palavras chaves para a busca: circulação fetal AND gestação oncológica AND quimioterapia na gestação AND quimioterapia na gestação, neoplasias gravidez, câncer. Resultados: A gestação é o período mais marcante na vida da mulher, e com o diagnóstico de câncer irá promover um longo tratamento, podendo incluir quimioterapia. Gerando complicações durante a gestação, e promovendo sentimentos de medos. Conclusão: Pode-se concluir que o tratamento de neoplasia é fundamental para a gestante. Contudo promoverá sentimentos insalutíferos. Assim, necessitando de atenção e assistência da equipe multidisciplinar.

Descritores: Câncer na Gestação; Radioterapia; Gestação.

#### **ABSTRACT**

**Objective** Actions in cancer therapy during pregnancy, and respectively their feelings of fears experienced. **Method:** Integrative review carried out from August to September 2021 at the Virtual Health Library. The following key words were used for the search: fetal circulation AND oncological pregnancy AND chemotherapy during pregnancy AND chemotherapy during pregnancy, neoplasms pregnancy, cancer. **Results:** Pregnancy is the most important period in a woman's life, and a diagnosis of cancer will promote a long treatment, which may include chemotherapy. This generates complications during pregnancy, and promotes feelings of fear. **Conclusion:** It can be concluded that the treatment of cancer is fundamental for pregnant women. However, it will promote unhealthy feelings. Thus, requiring attention and assistance from the multidisciplinary team.

**Descriptors:** Cancer in Pregnancy; Radiotherapy; Pregnancy.

#### RESUMEN

Objetivo: Acciones en la terapia contra el cáncer durante el embarazo y, respectivamente, sus sentimientos de temores experimentados. Método: Revisión integradora realizada de agosto a septiembre de 2021 en la Biblioteca Virtual en Salud. Para la búsqueda se utilizaron las siguientes palabras clave: circulación fetal Y embarazo oncológico Y quimioterapia durante el embarazo Y quimioterapia durante el embarazo, neoplasias embarazo, cáncer. Resultados: El embarazo es el periodo más destacado en la vida de una mujer, y el diagnóstico de cáncer promoverá un largo tratamiento, que puede incluir quimioterapia. Generando complicaciones durante el embarazo, y promoviendo sentimientos de miedo. Conclusión: Se puede concluir que el tratamiento de la neoplasia es esencial para la mujer embarazada. Sin embargo, promoverá sentimientos poco saludables. Por lo tanto, necesita la atención y la asistencia del equipo multidisciplinar.

Descriptores: Cáncer en el embarazo; Radioterapia; Embarazo.

## Introduction

Pregnancy is a unique period in a woman's life, marked by doubts and expectations, in addition to changes in the body, hormonal and/or behavioral changes.

Pregnant women diagnosed with cancer experience the dilemma created between ideal therapy for the mother and fetal well-being, which creates a challenging situation for the pregnant woman, fetus, family members and healthcare professionals involved, making the management challenging, delicate, whose conduct is often it generates difficulties and anxieties for the pregnant woman, since treatment is most often difficult, as the prognosis of the mother or fetus can be compromised.<sup>1</sup>

Cancer during pregnancy is a rare event, occurring around 0.001%, but it is the leading cause of death in women of childbearing age.2 The most common cancers in pregnant women are: breast cancer, cervical cancer, lymphomas, leukemias, cancer of the cervix, ovaries and melanoma.<sup>2</sup>

The adoption of the most effective treatment possible for the mother and the least toxic for the fetus must take into account the benefits and risks, since the choice is directly influenced by the gestational age, stage of the maternal tumor and possibilities of termination of pregnancy.<sup>3</sup>

In view of the facts presented, the following question arises: "What are the fears and characteristics of these experienced by women with a simultaneous diagnosis of cancer and pregnancy?"

Faced with the research problem, the following hypothesis emerges: "in the symbiotic relationship of the maternal-fetal binomial, the mother's fear prevails in relation to the development of the fetus, to her own health".

In this sense, this study aims to identify in the scientific literature the actions in cancer therapy during pregnancy, feelings and fears experienced in patients with simultaneous diagnosis of cancer and pregnancy.

#### Method

This is an integrative review, carried out from August to September 2021 through a literature review regarding cancer patients during pregnancy and their feelings highlighted.

For the construction of the integrative review, six distinct steps were followed: the identification of the theme and guiding question; establishment of inclusion and exclusion criteria for studies/sampling; definition of information to be extracted from selected studies/categorization of studies; evaluation of included studies; interpretation of results; and presentation of the review/synthesis of knowledge.<sup>4</sup>

In the selection of works, the databases of the Virtual Health Library (VHL) were accessed. The following keywords were used for the search: fetal circulation AND (la:("pt")), oncological gestation AND (la:("pt")), chemotherapy in pregnancy AND (la:("pt")), chemotherapy in pregnancy, pregnancy neoplasms, cancer.

Only scientific articles were selected to take part in the study (originals, systematized reviews, experience reports, essays and theoretical reflections); works whose abstract addressed the topic of health; available online, in Brazil,

and internationally, in complete form, in Portuguese and English that had related to cancer pregnancy, and their feelings. Exclusion and inclusion were applied, totaling 19 references as inclusion for integrative review.

Other types of publications were excluded, such as theses, dissertations, monographs, non-systematized bibliographic reviews, letters, reviews, editorials, books, book chapters, government publications and newsletters, as well as articles published in other media than the databases chosen; duplicate studies; studies available only upon payment; and that did not address the research object in a relevant way.

For the analysis, a thorough reading of the articles in full was carried out, with the purpose of verifying adherence to the objective of this study. To follow the guidelines of the integrative review, the articles were organized based on objectives, methodology, results and conclusion.

## **Results and Discussion**

During pregnancy, the mother goes through many physical, hormonal and psychological changes, dealing with changes in mood, feelings and new sensations. When it involves a pathology such as cancer, such feelings are aggravated. Radiotherapy and/or Chemotherapy treatment is most often necessary, bringing risks to the fetus and the mother. For the Ministry of Health, cancer is considered gestational if detected during pregnancy or during lactation and up to one year after childbirth (Puerperium).<sup>5</sup>

Treatment with chemotherapy has evolution and effectiveness for curing cancer, but they have harmful effects for the pregnant woman and especially for the fetus. There is an ambivalence between life and death, promoting great emotional conflict for the mother. The most affected neoplasms in pregnant women are cervical cancer and breast cancer. The diagnosis of these neoplasms, if not early, makes it more difficult for a good prognosis, and pregnant women end up correlating the symptoms to the normal changes in pregnancy, confusing these symptoms, making the diagnosis be delayed. Also taking into account the investigative conduct itself and staging should be less invasive due to the damage to the fetus. Hence the importance of preventive exams and selfknowledge. The diagnosis of breast cancer must be done as primary selfexamination, a method of visual and palpable diagnosis, in which the woman must observe any type of change such as breast contour, presence of folds, size, and skin changes. During pregnancy, a woman will have a great increase in the main circulating hormones, estrogens, progesterone, and prolactin, promoting breast enlargement and making it difficult to diagnose a possible neoplasm in pregnancy. Pregnancy diagnosed with cancer is considered high risk, so the fetus should receive regular fetal monitoring. Including umbilical artery Doppler and morphological US (ultrasonography).6-8 It is important and fundamental to communicate with other women, so that the exchange of information and experiences of other oncological pregnant women can occur.

Whether treatment includes radiotherapy during pregnancy may differ according to the dosage used, together with the gestational age. It requires great attention and care, as we have Risk-Benefit. Risks include the generation of complications during pregnancy, abortion, neurological problems in the fetus, for example microcephaly (the most common), growth retardation, cognitive

and/or behavioral changes. The benefits are slowing the progression of the disease (cancer), and promoting a possible cure.<sup>7</sup>

Due to all complications, pregnant women are afraid to undergo treatment, and receive popular recommendations to avoid the use of radiotherapy during pregnancy and other myths. A multidisciplinary team acts in the treatment, care requires great attention from the team, since the use of anticancer drugs is harmful to the fetus, and pharmacokinetic studies are minimal. The harmful involvement to the fetus depends on the gestational age. The high fetal exposure and vulnerability occurs between 4 to 8 weeks of gestation, when it is in the process of fetal formation and development. During these weeks, the organogenesis process takes place, an embryonic development process in which the three terminative layers (ectoderm, endoderm and mesoderm) differentiate and give rise to the body's internal organs. With this development up to the eighth week, the fetus has arms, legs, eyes, nose, lips, heart (general organs). The cardiac part, the 8-week-old fetus has divided and distinct chambers, and starts at approximately 150 bpm. During treatment, chemotherapy can be classified into adjuvant, and neoadjuvant. An example of a neoplasm that uses the above classifications is breast cancer. Because depending on the progress of the disease, surgery may be needed, so adjuvant chemotherapy is after surgery, in order to eliminate micrometastasis, and neoadjuvant chemotherapy before surgery, in order to reduce the tumor.<sup>7,9-10</sup>

During treatment, the hematopoietic system, which is responsible for the production of blood cells, can undergo changes, and with placental transfer, it can promote problems with fetal integrity. Due to prolonged exposure with dosages. Thus, drug transfer to the fetus occurs through the placenta.<sup>8,11</sup>

The main chemotherapeutic drugs used are: Doxorubicin/Mitocin (with its use cases of microcephaly have been reported); Antimetabolics: Methotrexate (cases of cranial and skeletal abnormalities); and Mitoxantivone (there are no cases of abnormalities with its use). With some citations of medications for the treatment of neoplasms during pregnancy, it is shown that chemotherapeutics have therapeutic actions, which, according to the dosage and types, may present a greater or lesser degree of harmful action to the health and integrity of the fetus. Pregnant women can develop the risk of fetal prematurity. Pregnant women with cancer prognosis are rare cases, however they require care, increased assistance to prevail and maintain maternal-fetal well-being. Early diagnosis is adequate and cautious, especially hormonal. During the gestational process, we have the elevation of some hormones: corticotrophin, cortisol, estrogen, progesterone and T4, and some neurotransmitters serotonin, which can promote gestational depression, and Epinephrine/Adrenaline sensation/feeling of fear. 12,7.

During treatment, it is up to the nursing professional to impose comprehensive, multidisciplinary care actions for women diagnosed with cancer. Intensifying the continuous assessment, family/and woman participation in the management of the pregnancy, helping with the psychological aspects, and properly carrying out prenatal care. There are studies showing that pregnancy by itself does not worsen the progression of cancer. After pregnancy, attention should be paid to breastfeeding, as treatment with chemotherapy should be interrupted, as the presence of antineoplastic agents such as Methotrexate, Doxorubicin, Cisplatin in breast milk has been reported. It can cause serious problems for the newborn. 13,7,14

## Feelings Experienced

The feelings of women during pregnancy fluctuate and change, among these new sensations, we see fear and anxiety. When we associate it with cancer diagnoses, and pregnancy? Because they cause bad feelings, internal conflicts, imbalances and suffering. Acceptance and the way to deal with the prognosis is not easy, they are psychologically shaken, with a longing for what the future holds, it is an emotional shock, destabilizing, generating feelings of anger, anguish and depression, for example. Each woman will react in different ways, including creating defense mechanisms, for example the self-denial of the disease. Emphasizing that there are cases of pregnant women, with oncological diagnosis, being clear about the case, and choosing to become pregnant. Women in whom they had self-knowledge of contraceptive methods, and put aside their bad feelings (fear, anguish, self-denial of the disease), and performed family planning to maintain their own and fetal well-being. 15-16

Pregnancy by itself is a difficult, contradictory, and intense phase, with countless changes occurring as mentioned. Mainly the psychic issue. The mother creates expectations/and possible image of her baby. In which, with the current situation of the discovery of the neoplasm, and its appropriate treatments (radiotherapy/and or chemotherapy), it ends up destroying these expectations, generating/and promoting the feelings mentioned above. Due to the fragility of the fetus, the mother is afraid to carry out the maternal-fetal bond, due to the possibility of the fetus having a short life span. Thus promoting another feeling for the pregnant woman, depression. Another vulnerability that pregnant women can suffer, and trigger depression, is suicide. It is widely demonstrated in the oncological literature that cancer is a risk factor for suicide. Citing other studies/literature citing suicide. <sup>16,17-19</sup>

Due to the treatment, the most common fetal complication is congenital malformation, causing a great impact on the pregnant woman. But after self-knowledge of the diagnoses, and generating such feelings, pregnant women perform/and develop self-control of fear, anxiety, achieving great fetal attachment. According to the following scale, fetal attachment data. 17-19

### Conclusion

Pregnancy is an important process for women, and there are few studies in the literature for an integrative review on the feelings of pregnant women about cancer. However, participation during diagnosis, the participation of the multidisciplinary team, during comprehensive care, including all stages of cancer, is essential. In addition to promoting care and physical care for pregnant women, we must provide social, educational, psychological care and support to offer maternal well-being.

It is concluded that any therapeutic action/treatment is essential, and fundamental for the patient. However, pregnant women have their differentials, in addition to dealing with the strong emotional impact, they must be aware (as well as the multidisciplinary team) of the advantages and disadvantages. Because treatment with chemotherapy can/and will be beneficial for the mother, and harmful for the fetus. Because self-knowledge of the treatment, emotional self-care is essential.

It is concluded that currently the main form of therapy for pregnant women is 'Oncology Surgery'.

The development of this research helps the multidisciplinary team working with diagnoses of cancer during pregnancy to understand the emotional dynamics of these women, to develop and carry out comprehensive and humanized care.

# Acknowledgment

This research did not receive funding for its completion.

### References

- 1. Sato K, Shimamoto H, Mochizuki Y, Hirai H, Tomioka H, Shimizu R, Marukawa E, Fukayama H, Yoshimura R, Ishida H, Harada H. Treatment of oral cancers during pregnancy: a case-based discussion. Journal of Otolaryngology Head & Neck Surgery. 2019;48(1):[7 screens]. Doi: <a href="https://doi.org/10.1186/s40463-019-0331-1">https://doi.org/10.1186/s40463-019-0331-1</a>
- 2. Garofalo S, Degennaro VA, Salvi S, De Carolis MP, Capelli G, Ferrazzani S, De Carolis S, Lanzone A. Perinatal outcome in pregnant women with cancer: are there any effects of chemotherapy? European Journal of Cancer Care [Internet]. 19 set 2016 [citado 30 nov 2021];26(6):e12564. Disponível em: <a href="https://doi.org/10.1111/ecc.12564">https://doi.org/10.1111/ecc.12564</a>
- 3. Hepner A, Negrini D, Hase EA, Exman P, Testa L, Trinconi AF, Filassi JR, Francisco RP, Zugaib M, O'Connor TL, Martin MG. Cancer During Pregnancy: The Oncologist Overview. World Journal of Oncology [Internet]. 2019 [citado 30 nov 2021];10(1):28-34. Disponível em: <a href="https://doi.org/10.14740/wjon1177">https://doi.org/10.14740/wjon1177</a>
- 4. Mendes KDS, Silveira RCCP, Galvão CM. Revisão integrativa: método de pesquisa para a incorporação de evidências na saúde e na enfermagem. Texto Contexto Enferm. 2008 Out-Dez; 17(4): 758-64. Doi: <a href="https://doi.org/10.1590/S0104-07072008000400018">https://doi.org/10.1590/S0104-07072008000400018</a>
- 5. Sena L, Neves MGC. Os impactos psicológicos do diagnóstico e tratamento do câncer de mama em mulheres. Com. Ciências Saúde[internet]. 2019[citado em 20 jun 2021]; 30(1):19-28.Disponível em: <a href="http://repositorio.fepecs.edu.br:8080/jspui/bitstream/prefix/159/1/367-Outros-3561-1-10-20200719.pdf">http://repositorio.fepecs.edu.br:8080/jspui/bitstream/prefix/159/1/367-Outros-3561-1-10-20200719.pdf</a>
- 6. Alquimim AF, Ladeia LSA, Rodrigues RK, Oliveira VB, Éscobar É GVF, Menezzi PTSD. Diagnóstico de cancer de mama na gestação: há dificuldades adicionais. Femina. 2011; 39(5):281-84
- 7. Schünemann Jr E, Urban C de A, Lima RS de, Rabinovich I, Spautz CC. Radioterapia e quimioterapia no tratamento do câncer durante a gestação revisão de literatura. Rev. Bras. Cancerol. 2007;53(1):41-6.
- 8. Boldrini NAT, Rossi KKC, Sassine TOT, Borges Filho HZ, Frizera HC. Câncer do colo do útero na gravidez. FEMINA [internet]. 2019[citado 23 jun 2021];47(1): 55-60. Disponível em: <a href="https://docs.bvsalud.org/biblioref/2019/12/1046493/femina-2019-471-55-60.pdf">https://docs.bvsalud.org/biblioref/2019/12/1046493/femina-2019-471-55-60.pdf</a>
- 9. Coelho RCFP, Panobianco MS, Guimarães PRB et al. Tratamento quimioterápico adjuvante e neoadjuvante e as implicações na qualidade de vida mulheres com câncer de mama. Rev enferm UFPE on line. 11(11):4732-40. Doi: <a href="https://doi.org/10.5205/1981-8963-v11i11a231216p4732-4740-2017">https://doi.org/10.5205/1981-8963-v11i11a231216p4732-4740-2017</a>

- 10. Cieto JF, Santos LAC, Gozzo, TO. Cancer durante a gravidez: análise dos casos com enfase nos resultados obstétricos e neonatais. Rev. enferm. Cent.-Oeste Min. 2021;11:e4096
- 11. Cavalli RC, Baraldi CO, Cunha SP. Transferência placentária de drogas. Rev Bras Ginecol Obstet. 2006; 28(9): 557-64. Doi: <a href="https://doi.org/10.1590/S0100-72032006000900009">https://doi.org/10.1590/S0100-72032006000900009</a>
- 12. Ferreira LRG, Spautz CC. Cancer de mama associado à gestação. FEMINA[internet]. 2014[citado em 20 jun 2021]; 42: 203-8.
- 13. Fernandes AFC, Santos MCL, Silva TBC, Galvão CM. O prognóstico de câncer de mama na gravidez: evidências para o cuidado de enfermagem. Rev. latinoam. enferm. (Online). 2011; 19(6): 1453-61. <a href="https://doi.org/10.1590/S0104-11692011000600024">https://doi.org/10.1590/S0104-11692011000600024</a>
- 14. Puzzi-Fernandes C. Cuidando de gestantes com câncer: experiência em serviço de referência. 2019. 73 p. Disponível em: <a href="https://llibrary.org/document/ye8gkg4y-cuidando-gestantes-experiencia-servico-referencia-pregnant-experience-reference.html">https://llibrary.org/document/ye8gkg4y-cuidando-gestantes-experiencia-servico-referencia-pregnant-experience-reference.html</a>
- 15. Vasconcelos L, Petean EBL. O impacto da malformação fetal: indicadores afetivos e estratégias de enfrentamento das gestantes. Psic. Saúde & Doenças[Internet]. 2009 [citado 2021 Nov 16]; 10(1): 69-82. Disponível em: https://www.redalyc.org/pdf/362/36219059006.pdf
- 16. Capelozza MLSS, Peçanha DL, Mattar R, Sun SY. A dinâmica emocional de mulheres com câncer e grávidas. Boletim- Bol. Acad. Paulista de Psicologia.2014; 34(86): 151-70.
- 17. Hem E, Loge JH, Haldorsen T, Ekeberg O. Suicide risk in cancer patients from 1960 to 1999. J Clin Oncol. 2004 Oct 15;22(20):4209-16. doi: <a href="https://doi.org/10.1200/JCO.2004.02.052">https://doi.org/10.1200/JCO.2004.02.052</a>
- 18. Medeiros ACR, et al. Sentimento materno ao receber um diagnóstico de malformação Congênita. Psicol. Estud. 2021; 26: e45012. Doi: <a href="https://doi.org/10.4025/psicolestud.v26i0.45012">https://doi.org/10.4025/psicolestud.v26i0.45012</a>
- 19. Silva SS, Aquino TAA, Santos RM. O paciente com câncer: cognições e emoções a partir do diagnóstico. Rev. bras. ter. cogn[internet]. 2008[citado 2021 Nov 16]; 4(2): 73-89. Disponível em: http://pepsic.bvsalud.org/pdf/rbtc/v4n2/v4n2a06.pdf