

# Patient's journey with HER2 positive breast cancer: difficulties in the access to treatment and new technologies in the Brazilian public health system

A jornada da paciente com câncer de mama HER2+: dificuldades no acesso ao tratamento e novas tecnologias

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## ABSTRACT

**Introduction:** Many limitations in the Brazilian public health system make the patient's journey with HER2+ breast cancer and the access to better treatments hard. In the scenery in which all the economic resources of the country are limited, the right incorporation of the health technologies proves to be a challenge. **Purpose:** To identify the main issues regarding the patient's journey with HER2+ breast cancer in Brazil's public health system scenario and, in this context, demonstrate the incorporation process of a new drug technology for this condition. **Methods:** The bibliographic compilation was done selecting published documents in English or Portuguese and the "Recommendation Report from CONITEC - nº 319" was the main source of this bibliographic review. **Results:** The introduction of the target therapy with pertuzumab has proved to be another state-of-the-art option for the treatment of HER2+ breast cancer. The society and scientific community's engagement have proved to be extremely influent so the incorporation of this therapy in the Brazilian public health system would be possible. Pertuzumab's incorporation process has properly respected the concepts encompassed by the Brazilian Health Technology Assessment. However, after the positive deliberation regarding pertuzumab's incorporation process, it has not been registered its supply to the population, suggesting a delay in the predetermined due date by the law. **Conclusion:** The implementation of innovative technologies to Brazilian public health system became a way to provide equal access to society, if they sustainably fit in the system. The assessment of this article has allowed a deeper knowledge regarding the reality of the journey's patient in the public health system, the importance of the Brazilian Health Technology Assessment, of the incorporation and transfer of technologies and the society's engagement in this scenery.

**Keywords:** Breast Cancer; HER 2 Breast Cancer; Brazilian Health Technology Assessment; Brazil's public health system; pertuzumab; trastuzumab.

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**Financial support:** none to declare.

**Conflicts of interest:** The authors declare no conflict of interest relevant to this manuscript.


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Received on: December 10, 2019 | Accepted on: August 22, 2020 | Published on: November 17, 2020

DOI: <https://doi.org/10.5935/2526-8732.20200031>

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## RESUMO

**Introdução:** Muitas limitações no sistema público de saúde brasileiro dificultam a jornada da paciente com câncer de mama HER2+ e o acesso a melhores tratamentos. Como os recursos econômicos do país são limitados, a incorporação adequada de novas tecnologias em saúde mostra-se um desafio. **Objetivo:** Identificar as principais questões relacionadas à jornada da paciente com câncer de mama HER2+ no sistema público de saúde brasileiro e, nesse contexto, demonstrar o processo de incorporação de um novo medicamento para essa condição, incitando avaliação crítica sobre o tema. **Métodos:** Compilação bibliográfica, selecionando documentos publicados em inglês ou português, sendo o "Relatório de recomendação da CONITEC - nº 319" a principal fonte desta revisão. **Resultados:** A terapia com pertuzumabe provou ser uma importante opção para o tratamento do câncer de mama metastático HER2+. O engajamento da sociedade e comunidade científica mostrou-se influente no processo de incorporação desse medicamento no sistema público. O processo de incorporação respeitou a Avaliação de Tecnologias em Saúde, no entanto não respeitou prazos de análises e de disponibilização do medicamento à população. De qualquer forma, a incorporação representou diminuição da discrepância entre os tratamentos no sistema público e privado nesta condição. **Conclusão:** A incorporação de novos medicamentos surge como uma forma de proporcionar acesso a melhores tratamentos à sociedade, desde que se enquadrem de forma sustentável no sistema. A análise deste artigo permitiu maior conhecimento sobre a jornada da paciente no sistema público e a importância da Avaliação de Tecnologias em Saúde para processos de incorporação.

**Descritores:** câncer de mama; cancer de mama her 2; avaliação de tecnologias em saúde; sistema público de saúde brasileiro; pertuzumabe; trastuzumabe.

## 1. INTRODUCTION

Brazil's public health system shows a lot of inefficiencies, mostly regarding basic service and specially in oncology. This kind of limitation may occur due to many factors that make the patient's journey and the access to better treatments hard and narrow its options. The problems that cancer patients face make a strong impact in their life quality and show issues that could be argued and better understood in order to create more awareness and a critical analysis regarding SUS (Sistema Único de Saúde) [Brazilian abbreviation that refers to public healthcare system in the country].

Overall, the problematic related to oncology in the public system becomes serious due to the lack of access to primary health services, the long gap between the diagnosis and the beginning of the treatment and the unavailability of high standard treatments<sup>1</sup>. Hence, treatments frequently get started when the tumors are already in very advanced stages and therapy available at SUS is not always the ideal one for the situation, due to the fact that it may not be a high standard therapy already approved by ANVISA (Agência Nacional de Vigilância Sanitária) [Brazilian abbreviation that refers to national health surveillance agency in the country] and available to be commercialized in the private system, for example<sup>2</sup>.

In Brazilian women, breast cancer is the most common one: in 2016, it was estimated 57,960 new cases, which represent an incidence rate of 56,2 cases per 100.000 women. Mortality rate in Brazil represent the first cause of death by cancer in the female population, with 13,68 deaths/100.000 women in 2015<sup>3</sup>. Breast cancer cases that present overexpression of HER2 (Human Epidermal Growth Factor Receptor-type 2) protein represent the worst prognosis condition<sup>4</sup>.

In the context where the country's economic resources are limited, including to the public health department, the correct implementation of health technologies proves to be a challenge, especially when they are technologies related to cancer treatment that generally present higher cost<sup>5</sup>.

The concept of technology in the healthcare sector is wide and it represents all the interventions that may be used to promote health and to avoid diagnose and treat diseases. The "Avaliação de Tecnologias em Saúde" (ATS) [Brazilian abbreviation that refers to evaluation of health technologies in the country] is a process that aims to analyze the consequences of the technology use regarding the health, short and long term, based on clinical, social, economic and ethical evidence. Therefore, ATS comprises an important technical grant for the decision-making about the implementation of technologies in healthcare<sup>6</sup>.

For patients with HER2 positive metastatic breast cancer, pertuzumab has proved to be an innovative and necessary treatment. However, it was only available for the Brazilian private healthcare system, while patients who depended on public healthcare had no right to access the medication, which reinforced the difference between public and private treatments in this condition.

## 2. OBJECTIVES

This article aims to identify the main issues that follow a patient's journey with HER2+ breast cancer in Brazil, using the public health system and, in this context, present and justify the implementation process of a new drug technology, that claims to decrease the divergence of available technologies among the public and private systems, prompting, by all means, a critical evaluation regarding the topic.

## 3. MATERIALS AND METHODS

The Recommendation Report from CONITEC - nº 319 was the main source of this bibliographic review, which describes all the justification and conditions for the approval of the drug technology implementation mentioned above.

For the article research, the search was done using the following keywords, isolated or combined among themselves: "breast cancer", "HER2 breast cancer", "patient journey breast cancer", "jornada da paciente com câncer de mama no sistema público [patient journey breast cancer in the public system]", "avaliação de tecnologias em saúde [health technology assessment]" and "pertuzumabe".

The articles were initially selected by the reading of its abstracts and, based on those related to the theme, the reading of the whole article was done. As inclusion criteria, both english and portuguese articles were taken into consideration.

## 4. RESULTS

### 4.1 Breast cancer patient's journey: obstacles and access to treatment

Since the suspect of breast cancer diagnosis up to the service of proper treatment, the patient may already face many obstacles in the healthcare public system<sup>1</sup>. Overall, it may occur three strong main issues during this journey that follows.

The first problem to be overcome is the struggle to receive early and correct diagnosis, since the citizen frequently does not know other ways to look for help when the first symptoms appear and, even when she goes to a Unidade Básica de Saúde (UBS) [brazilian abbreviation that refers to Basic Healthcare Unit in the country], she faces a long waiting period to have the supporting evidence for a diagnosis, as well as the waiting period to be referred to a Centro de Assistência de Alta Complexidade em Oncologia (CACON) [brazilian abbreviation that refers to

Oncology High Complexity Assistance Center in the country]<sup>1</sup>.

The next obstacle is the time between the diagnosis and the beginning of treatment. According to the Ministry of Health in Brazil, data from February 2017 of Sistema de Informações do Câncer (Siscan) [brazilian abbreviation that refers to Cancer Information System in the country] show that only 60,6% of registered patients had the first treatment within 60 days, from the day the diagnosis was informed, observing the law N° 12.732 ("60 days law"). To the other patients, the non-compliance with the law happens, mostly, due to the great bureaucracy involved, including supporting exams and authorizations, not mentioning the lack of structure and update of public institutions<sup>1</sup>.

The third and last obstacle, primary focus of this article, is related to the impossibility of the patient to receive a high standard treatment already approved by ANVISA, that could be already approved by Comissão Nacional de Incorporação de Tecnologias (CONITEC) [brazilian abbreviation that refers to National Commission of Technology Implementation]. There are management and structure problems, as well as a lack of updating not only at the SUS but also at the private system, but when they are compared, the discrepancy is significant. The probability for the patient to receive a high standard therapy in the public system is significantly smaller<sup>7,8</sup>.

The implementation of a new high standard drug is extreme, mainly because it could reduce complications from the disease progress, bring life quality to patients and also reduce the expenses with hospitalizations and lawsuits<sup>7</sup>.

### 4.2 Treatment for HER2+ metastatic breast cancer

HER2+ cancer cells characterize by presenting a great number of HER2 genes and, consequently, the increase of receptors in the tumor cells surfaces. This phenomenon is known as overexpression of HER2 receptor<sup>9</sup>.

Between 15 and 20% of breast cancer cases present an overexpression of HER2 protein, whose abbreviation means Human Epidermal growth factor Receptor – Type 2 and it is coded by the ERBB2 gene. This is a serious condition, since it assures a more aggressive behavior to the tumor cell, showing itself with greater invasive capacity and tendency to metastasis<sup>10</sup>.

The target drugs or target therapies are those that act in specific spots in the tumor cells and due to genetic advances and the growth of studies of cancer molecular basis, have been presented as new and effective therapeutic options<sup>11</sup>.

The first target therapy approved by ANVISA for the treatment of metastatic breast cancer with overexpression of HER-2 was trastuzumab

(Herceptin®), in September 1999, belonging to Roche enterprise<sup>12</sup>.

Only in 2012, trastuzumab was implemented in SUS, but so far, only to treat patients with another indication: with breast cancer in early stages and locally advanced<sup>4</sup>. In August 2017 the trastuzumab was implemented for the treatment of HER2+ metastatic breast cancer as first line treatment, according to the Clinical Protocol and Therapeutic Directives of the Healthcare Ministry, in the context of SUS. Before that last implementation, patients with the mentioned condition had access only to chemotherapy and hormone therapy in the public system<sup>6</sup>.

Trastuzumab is considered by the World Health Organization (WHO) as one of the essential drugs to treat cancer and has changed the way breast cancer is treated in several countries<sup>13</sup>.

In 2013, ANVISA approved another innovative target therapy for the same condition: pertuzumab (Perjeta®), also belonging to Roche enterprise and it is still used in therapeutic association with trastuzumab (Herceptin®) and docetaxel. However, this therapeutic association was only implemented in SUS in December 2017<sup>14</sup>.

#### 4.3 Pertuzumab + Trastuzumab + Docetaxel for the treatment of HER2+ Metastatic Breast Cancer

The implementation of trastuzumab in clinical practice has revolutionized HER2+ breast cancer treatment. However, the disease's progression in many patients and the continuous interest in developing new molecules that could act as a target therapy led to pertuzumab's development, the first agent from the class of dimerization's inhibitors of HER<sup>15</sup>.

Pertuzumab is a recombinant monoclonal antibody, humanized, that acts in the domain of extracellular dimerization of HER2, located in the opposite side of the domain where the trastuzumab connects. Besides that, pertuzumab is a cytotoxicity mediator dependent of antibodies, which means it causes the target cell lyses whose membrane surfaces were covered again by specific antibodies<sup>16</sup>.

In a general way, pertuzumab avoids the induced dimerization by HER2 ligand with HER3 suppressing, therefore, the route activation of cell signaling that provokes tumoural growing<sup>17</sup>. Hence, the action mechanisms of trastuzumab e pertuzumab are complementary and, when combined, represent a more complete blockage of the responsible signalization by the activation of tumoral growing.

It was observed that the combination of trastuzumab and pertuzumab results in a loss of up to 60% of cancer cells, while individual drugs, with the same dosage, cannot change the cell's survival<sup>18</sup>.

Up to 2017, patients using the private healthcare system already had access to all anti-HER2 agents approved by ANVISA (since the disease in the initial phase until the metastatic phase), that include trastuzumab, pertuzumab<sup>14</sup>, trastuzumab emtansine (T-DM1) and lapatibib. But patients who depended on SUS, that covers approximately 75% of the Country's population, had access only to trastuzumab during the initial phase of the disease<sup>19, 20</sup>.

Besides that, as initially presented, the existence of obstacles in the public system makes it difficult the disease's early diagnosis, adding to a worst prognosis. For more than 50% of the cases, the breast tumors are diagnosed in more advanced stages, those that generally lead to metastasis, which means the late diagnosis is intimately related to the metastatic disease<sup>21</sup>.

Therefore, the lack of access to therapy considered a standard treatment represented a common problem for patients with the metastatic disease and in poor social situation, having a more elevated mortality rate in this group<sup>22</sup>. Hence, it was urgent that a drug considered as a high standard for this condition could also be available for patients using the public system.

About this topic, oncologists who are members of the Sociedade Brasileira de Oncologia Clínica (SBOC) [Brazilian abbreviation that refers to Brazilian Society of Clinical Oncology] published an important article that demonstrates how the lack of access to pertuzumab for the treatment of HER2+ metastatic breast cancer at SUS would result in the early death of patients with the disease. In the study, they affirmed that *"the implementation of trastuzumab and pertuzumab (in the public system) would significantly increase the life time of women with HER2+ metastatic breast cancer in Brazil, avoiding 768 early deaths in the following two years"*<sup>7</sup>.

With this condition exposed, the producer of the product, Roche and SBOC sent, as a technical dossier, the request for the implementation of Pertuzumab in association with trastuzumab and docetaxel at SUS, whose process will be presented in detail as of item 4.5.

#### 4.4 CONITEC and the implementation of a new technology

According to the Law n. 12.401, in order a new drug, procedure and/or equipment to be implemented in public health system, it is necessary that CONITEC make an analysis of the present technology to decide if it is as good as, or better than, those already implemented and in use.

To make a technology assessment request, the author must submit to CONITEC studies of efficacy, safety, economic evaluation and budget impact to make possible to evaluate the implementation.

The period for the document's analyses, sent as a technical dossier, and the decision's official publishing is 180 days, counted from the protocol date of the request. This period may be extended for 90 more days<sup>23</sup>.

The House evaluates the documents and requests that a technical report is available for public access, in order society can have an opinion in the process of making a decision towards the inclusion of new technologies.

After evaluating the received contributions during 20 days of Public Consultation, the House votes and gives out a Final Recommendation, that may be favorable or against the implementation of the new technology in SUS<sup>24</sup>.

In case it is favorable to the implementation, SUS departments have 180 days to make the technology available to the whole population<sup>25</sup>.

#### **4.5 The implementation process of Pertuzumab + Trastuzumab + Docetaxel in the Health Public System**

Since all the submission dates of technical dossiers with requests for new technologies implementation are not public, it is impossible to know when exactly a plaintiff submits a protocol with an implementation request. However, CONITEC publicly provides on its website all the meetings topics and minutes regarding the discussion of the requested technologies, since 2015 up to now<sup>26</sup>.

The minute referring to the discussion meeting about the implementation of Pertuzumab + Trastuzumab + Docetaxel (March 2017) describes the analyses and the initial conclusive opinion of CONITEC regarding the implementation request by the plaintiff: Roche Chemical and Pharmaceutical Products S.A. and SBOC. Therefore, it is possible to infer that the submission date of the technical dossier was, evidently, before this period and, possibly, close to it.<sup>27</sup>.

##### **4.5.1 Documents about clinical and economic evidence sent by the plaintiff to CONITEC:**

With the demand from the product's manufacturer, Roche and SBOC for the implementation of pertuzumab associated with trastuzumab and chemotherapy for patients with HER2+ metastatic breast cancer as the first option for treatment, CONITEC performed a literature review, in order to check clinical and economic evidence sent by the plaintiff.

In this process, the research question was described as: "The use of pertuzumab associated with trastuzumab and chemotherapy is effective, safe and has an effective cost as the first option of treatment for patients with HER2+ metastatic breast cancer compared to therapies currently available at SUS?"

In this review, only one randomized clinical trial, named Cleopatra, evaluated the use of the drug combination. The study indicated that the association enables a global survival of 56,5 months and the implementation of pertuzumab to the treatment done with trastuzumab and docetaxel enables the global survival to increase by 15,7 months. The safety profile presents itself similar to the association of docetaxel and trastuzumab<sup>28</sup>.

It was not found a comparative analysis between isolated chemotherapy and the association of pertuzumab + trastuzumab + CT (chemotherapy). Therefore, so the comparability of the available results was possible, an indirect comparison was used from studies with similar populations.

The plaintiff Roche has estimated, with a 10-year time horizon, a RCEI (Razão Custo-efetividade Incremental) [Brazilian abbreviation that refers to Incremental Effectiveness Cost Rate] of R\$ 260.440/year of life gained.

Regarding the budget impact, the plaintiff Roche projected a study whose budget impact value was R\$ 884.937.188. Considering an alternative context, in which may occur with legal actions, the plaintiff pointed that the real budget impact would be around R\$ 201.442.436 in five years.

##### **4.5.2 CONITEC's conclusive opinion regarding the documents analysis sent about clinical and economic evidence**

Through the evaluation of presented clinical evidence, CONITEC understood that Cleopatra's clinical trial data showed improvement in global survival and survival free from progression. However, it did not exist straight comparisons between pertuzumab + trastuzumab + CT versus CT. To CONITEC, the indirect meta-analyses are not ideals to implementation decisions, since the used approximations might not well represent the reality.

For the effectiveness cost analysis, CONITEC's opinion also presumed that drug does not have an effective cost in Brazil, since the budget impact analyses showed high values necessary for the technology implementation.

About the considerations regarding the legal actions impact, CONITEC says the health legal action, indeed, may damage the resources distribution and the health public system sustainability, on the other hand, there are also damaging consequences with the implementation of drugs that do not have effective cost and low efficiency. CONITEC emphasizes yet that for budget impact analysis, economic-political juncture and social values should be considered for making decisions.

Since pertuzumab's high sale price represented the main parameter that affected the drug's cost effectiveness relation, CONITEC suggested the

possibility of price negotiation with the manufacturer in order to enable the implementation in SUS.

In face of the exposed, during 53<sup>rd</sup> ordinary meeting performed by CONITEC, the House members recommended the subject was sent to Public Consultation as a prior manifestation not favorable to the implementation of pertuzumab associated with trastuzumab and docetaxel.

#### 4.5.3 Public Consultation

Between April 12th 2017 and May 02nd 2017, the technical report was placed for public consultation n° 13<sup>29</sup>.

During this time, 208 technical-scientific contributions were received and 427 opinion or experience contributions<sup>30</sup>.

#### 4.5.4 Technology's transfer

As an addition to its contributions, the plaintiff Roche sent an additive document, presenting its technology transferring offer, by means of a partnership of public and private institution<sup>4</sup>.

#### 4.5.5 Contributions global evaluation by the CONITEC's Plenary and Final Deliberation

After performing all the contributions analyses sent during the time of public consultation, which were, in vast majority, not favorable of CONITEC's initial recommendation, the Plenary members agreed that there was enough evidence and corrected its initial recommendation, but, it would still be necessary a price negotiation with the drug's manufacturer, since the technology would not present an effective cost.

It was suggested that the maximum price allowed was proportional to the additional benefit the pertuzumab brings, beyond the already implemented trastuzumab, in other words, the value to be paid for the addition of pertuzumab to the standard therapy should be directly proportional to the increase of survival brought by technology.

This way, the "Law N° 57, of December 4<sup>th</sup>, 2017" became public the decision to implement pertuzumab for the HER2+ metastatic breast cancer as the first option of treatment, conditioned to price negotiation, in SUS context.

#### 4.5.6 Drug's provision to population

Hitherto the writing of this article, September 2018, it was not found data regarding purchases done by the federal government. A digital research was performed using the Portal da Transparência [Transparency Portal] website where it was possible to see all purchases of federal government regarding healthcare and, using keywords "pertuzumab" and/or "perjeta", there is no data about federal purchase. (The Transparency Portal website is a Brazilian government portal dedicated to making public all federal government expenditures).

## 5. DISCUSSION

In the public healthcare system, especially in the oncological department, the patient's journey represents a problematic that compromises a fair and egalitarian treatment to the whole population<sup>1</sup>. HER2+ breast cancer in its advanced stage could well exemplify this context. As shown, the obstacles the patient faces at SUS end up with a disease's late diagnosis, which generally requires treatments and support that generate more expenses to the government<sup>5</sup>. Furthermore, the lack of access to new generation therapies already approved by ANVISA and that are not implemented represent a great discrepancy when it is compared to the possibilities offered in a private system<sup>7</sup>.

The implementation of the target therapy with pertuzumab (Perjeta®) has revolutionized clinical practice, being another state-of-the-art option to the treatment of HER2+ breast cancer in its advanced stage<sup>18</sup>. The patients group engaging, NGOs and medical community was extremely influent and meaningful to make this therapy's implementation a possibility in SUS, becoming, therefore, an instrument of pressure on the healthcare public system, so the new technology could be available in a fair way to the whole society<sup>4</sup>.

Thus, the implementation of new technologies in healthcare emerge as a way to ensure the population's access to technologies that fit better in a context, not only in healthcare need, but also in an economic and sustainable context to SUS<sup>31</sup>.

The implementation request of pertuzumab was properly analyzed under the ATS concepts, in which are taken into consideration the clinical, social, ethical and organizational issues regarding to this technology use, through a robust, unbiased and systematic methodology. This means that ATS represents indispensable criteria for the decision-making regarding the technologies implementation in healthcare for SUS<sup>32,25</sup>.

The transparency in most of information obtained was an important factor to be observed. Not only the technical report, containing the procedural analysis available, but also the documents sent during public consultation, may be easily found and accessed by any citizen. The public consultation itself represents a possibility of the society's participation, since it has the rights, ensured by law, to contribute with the ATS process. In the implementation process of pertuzumab, around 90% of all the contributions related to "experiences or opinions" partially or completely disagreed with the initial decision of CONITEC's plenary, which shows society was strongly engaged in favor of this implementation<sup>33,34</sup>.

Even with all the clinical benefits presented and demonstrations of the implementation positive consequences, CONITEC's plenary was very reluctant to pertuzumab's implementation, mostly due to its high price, low effectiveness cost and great budget impact, which could damage the healthcare public

system economic sustainability. However, the submission of a proposal about the technology transfer from the product's manufacturer allowed better negotiations to make the implementation possible<sup>4</sup>.

Technologies Transfers carry out important impact to the Country's public system and its regulation appear in the decree nº 9.245, of December 20<sup>th</sup> 2017, that nominates the Política Nacional de Inovação Tecnológica (PNITS) [Brazilian abbreviation that refers to National Politic of Technological Innovation in Healthcare] and regulates the use of purchase power of the State for hiring and acquisitions that involve products and strategic services to SUS. Thus, PNITS aims to reduce the external dependency and productive and technological vulnerability of the Country regarding the products and strategic services to SUS, aside from promoting technological and economic sustainability and increase the productive and innovative capacity in Brazil<sup>35,36</sup>.

The analyses of the whole description of pertuzumab's implementation process lead us to affirm that the process has partially respected the Law 12.401, that define the flow, dates and criteria for the implementation.

The flows of the implementation's request processes of a new technology in healthcare were properly respected and the analysis criteria also respected the concepts related to ATS. However, this did not happen with deadlines fulfillment: the submission date of the technical dossier happened before the submission of CONITEC's conclusive opinion, as described in the item 4.5., which means, prior the month of March 2017. Yet, the ordinance publishing date with the process final decision happened in December 2017, totalling a period greater than 180 days (more than 90 days) allowed by the law. In addition to that, after the publishing of favorable decision in the DOU, SUS departments have up to 180 days to enable the technology to the population, which means, once the pertuzumab' implementation ordinance was published in December 2017, its availability should have been initiated until June 2018. However, according described in the item 4.5.7, hitherto the writing of this article, in September 2018, it was not possible to find data regarding purchases made by the federal government.

Thus, the non-compliance of the Law 12.401/2011 and the Decree 7.646 (art. Nº 25) by the government suggests the lack of efficiency in the analysis promptness and the drug's offer.

Anyhow, the publishing of Ordinance n. 57, of December 4<sup>th</sup>, 2017, which made the pertuzumab's implementation public in SUS represented a great achievement for society and the decrease of the discrepancy among the public and private health treatments in this condition, in addition to offer a new perspective to SUS patients with HER2+ metastatic breast cancer, who will have access to a better therapy.

## 6. CONCLUSIONS

The healthcare public system faces great obstacles and issues that bring very damaging consequences and hurt Human Rights regarding the State's duty to provide access to fair and equal healthcare to all. The implementations of innovative technologies to SUS emerge as a way to make this egalitarian access possible, since they work in a sustainable for the system.

This article's analyses and discussion allowed a good insight regarding the reality of the patient's journey with breast cancer in the healthcare public system; as well as the awareness of ATS's importance and also the implementation processes and technologies transfers and the society participation in this scenario.

To consider the social, political and economic juncture of the Country is fundamental to understand and criticize the conditions and limitations of the systems that are part of the patient's journey and the access to a health treatment closer to the ideal.

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