



## Market Study for The Proposal of a Medical Unit of Specialties in Breast Diseases in The State of Tlaxcala

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**Abstract.** This article presents the results of the market study of a proposal for a medical unit of specialties in breast pathologies in the state of Tlaxcala, in which the feasibility of implementing this type of unit was determined; which could be considered a pioneer in the state. Since there are no hospitals with this level of care for women with these pathologies, there is a high mortality due to not having sufficient resources to attend to other states. Currently, the state of Tlaxcala does not have a radiotherapy service in the public or private sector. The demand for health services has increased in the state. This is due to the rapid demographic growth of the region; however, it can be said that the demand for health services specialized in breast pathologies is unsatisfied, since the health centers within the state do not cover what is required by the market in this area.

### To cite this article

[Sánchez, A. I. A. A., López, A. T., Matamoros, K. L. V., Gutierrez, J. C. & Hidalgo, K. G. (2021). Market Study for The Proposal of a Medical Unit of Specialties in Breast Diseases in The State of Tlaxcala. *The Journal of Middle East and North Africa Sciences*, 7(06), 16-19]. (P-ISSN 2412- 9763) - (e-ISSN 2412-8937). [www.jomenas.org](http://www.jomenas.org). 3

**Keywords:** Market Research, Radiation Therapy, Breast Cancer, Service Demand.

### 1. Introduction:

Cancer is a very common disease. In Mexico it is the third cause of death only behind cardiovascular disease and diabetes mellitus. The number of cases in practically all cancer centers in the country is increasing. This requires a greater number of doctors, nurses, and paramedics, as well as infrastructure to be able to establish the beginning of the diagnosis. The procedures are often invasive and annoying; treatments with surgery, radiotherapy, chemotherapy, and other systemic management up to palliative care (Rivera, 2017).

In Mexico, twenty-three Specialized Cancer Centers (CEC) are operating, as well as the oncology units of The Hospital Juárez, The General Hospital of Mexico and The National Cancer Institute (INCan), which constitute the network that provides medical care to patients with breast cancer. Of these CECs, only three (thirteen percent) are decentralized and the remaining twenty (eighty-seven percent) are decentralized and depend on the State Health Secretariat. There is a special case, the State of Mexico: despite having an equipped CEC, this center provides medical attention exclusively to the population entitled to the Social Security Institute of the State of Mexico and Municipalities (ISSEMyM) with a diagnosis of cancer.

The non-eligible population with this type of cancer diagnosis has to travel to Mexico City to receive specialized treatment; but recently, the procedures of said CEC for its accreditation before the Seguro Popular in uterine cervical cancer and breast cancer began (Mohar, 2019).

The State of Tlaxcala is located, along with other states, within those that do not have a CEC. The Mexican Society of Oncology (SEO) considers that the high numbers of deaths from cancer are due to late diagnoses. Sixty percent of cancer cases in Mexico are detected in advanced stages. It is estimated that ninety-eight percent of deaths are of women and two percent of these are due to breast cancer. Metastatic breast cancer causes the highest number of deaths (Rivera, 2017).

In the State of Tlaxcala, there is a Specialized Medical Unit for Breast Cancer (UNEME-DEDICAM), which offers specialized studies for the prevention and detection of any breast pathology, and the Women's Hospital that provides gynecological-obstetric services.

### 2. Description of the Methodology:

#### 2.1. Market study

The development of this market study is based on the theory of the four P's (the product, the price, the promotion and the distribution). To achieve a global and



accurate vision of all the aspects to be considered for the unit in study, having these four variables clear; much more specific strategies can be designed and a realistic and well-founded marketing plan can be drawn up.

### 2.2. As a product

The construction that was projected as headquarters for the Medical Unit in Breast Pathologies Specialties in the state of Tlaxcala, and which, in turn, is equivalent to a construction area of 530 m<sup>2</sup>.

### 2.3. As a service

The services that will be offered within the Medical Unit in Breast Pathologies Specialties in the state of Tlaxcala are comprehensive treatments for patients with any breast pathology detected through a prior medical study (ultrasound, mammography, magnetic resonance, or physical exploration). This is in order to provide the state society a comprehensive and complete treatment.

### 2.4. Development reasons

The main reasons that were taken into account to develop this model of medical unit are the following: That the patient receives a quality service in the shortest possible time; That the average stay of hospitalizations decreases; That the hospital can increase revenue by seeing a greater number of patients; That it be invested in the modernization of the center.

Dedicated breast cancer specialists will provide expert, personalized care with the latest treatment innovations and technologies. A comprehensive service, without leaving the unit, with a variety of specialists who work together and meet to analyze cases on a regular basis. This ensures that patients receive comprehensive care that takes into account all their required needs.

### 2.5. Data collection

To collect relevant data and information, the interview script and the recording of statistical figures were used as data collection instruments, the results of which were triangulated. For this analysis, the use of information from "primary sources" was used and to have access to this type of information, the strategy of direct interview with personnel from the areas of chemotherapy, radiotherapy, nuclear medicine, and oncological surgery of medical centers of the state of Puebla, as well as from "secondary sources", obtaining historical statistics on the official pages of INEGI (2015-2019), CONEVAL (2016) and Health Sector (2015-2020), which allowed us to have first-rate information hand.

The interviews were designed around questions relevant to the project in such a way that they allow the following information to be determined: Patients who undergo a mammogram; Patients who resulted with any breast pathology; Patients who tested positive for breast cancer

The following study variable was defined:

*Patients with breast pathologies: variable focused on the possible consumption of the medical treatment to be offered.*

### 2.6. Market segmentation

Public health services are not the most efficient despite the fact that the federal and state governments have invested large amounts of resources in some state hospitals.

For this reason, a large population opts for private health services, despite the high costs that these can generate for the family budget.

On the other hand, there is an important offer of private health services. The competitive advantages of the Medical Unit of Specialties in Breast Pathologies lie in the use of cutting-edge technology and the specialized dedication to its patients with the latest equipment. The greatest strength is given by the routine and specialized examinations that are offered, where some of which will only be offered by this unit, throughout the state of Tlaxcala, among the unique specialized services in the state of Tlaxcala, we can mention: Ultrasound-guided breast punctures; Radiation therapy sessions (brachytherapy and teletherapy); PEM mammograms.

The services of the Medical Unit under study will be focused on the state of Tlaxcala, due to the lack of specialized services in breast pathologies. Based on the interviews and statistics that were carried out, the market segmentation shown in table 1 was carried out.

Table 1 Market segmentation

Market segmentation or target population	
Base	Descriptors
Geographically	Country region: Tlaxcala
	Size of the market:
	1,357,445 inhabitants 644,786 women
Demographically	Age: it is aimed at women over 15 years of age, since it is very unlikely that minors of that age will present any pathology, however, it does not completely exempt them
	Gender: women
Psychographically	People who have a mammogram per year: 22,200 People with a breast disease: 1500 on average per year People diagnosed with breast cancer: 210 on average per year
Behaviorally	Expected benefits: reduction of breast cancer mortality.
	Place of treatments: Medical Unit of Specialties in Breast Pathologies in the State of Tlaxcala



Source: Own elaboration based on Statistics from INEGI, CONEVAL, Health Sector and Civil Registry of the State of Tlaxcala, 2021.

### 2.7. Price

The determination of prices was considered according to a direct field analysis of prices, obtained from private clinics in the state of Puebla and some private hospitals in the state of Tlaxcala.

The current prices on the market are as follows:

Table 2 Current prices of medical oncology services.

SERVICE		COSTO
Bilateral mammogram	Price per studio	\$850
Unilateral mammogram	Price per studio	\$600
Bilateral breast echo	Price per studio	\$850
Fine needle puncture	Price per studio	\$500
Core needle puncture with trucut	Price per studio	\$5000
Radiotherapy	Price per shot	\$3500
Chemotherapy	Price per studio	\$15000
Conservative cancer surgery	Price per intervention	\$55000
Mastectomy surgery	Price per intervention	\$70000
Gammagrafía	Price per session	\$4800
Tomografía con medio de contraste	Price per session	\$4000
Biopsia dirigida con arpón	Price per intervention	\$15000
Colocación del Arpón	Price per intervention	\$3500
Consulta de Especialidad oncológica	Price per medical consultation	\$800

Source: Own elaboration obtained from private hospitals in the state of Tlaxcala and Puebla, 2021.

It is important to clarify that these are the prices for people who attend by their own means, without being carried out through a private insurance company, or who are a beneficiary of any federal health program.

Treatment costs vary from patient to patient. Currently, the approximate treatment cost for breast cancer depending on the stage it is in- is between 100,000 and 450,000 pesos per patient. This is the equivalent of between 5000 and 22,000 dollars.

### 2.8. Offer analysis

For the study and within the geographic area of the project (state of Tlaxcala), several health centers can be located; which provide first and second level hospital

services. These centers do not represent greater competition, since they do not offer in the same place several oncological specialties that guarantee a comprehensive treatment for the patient.

On the other hand, the center specialized in attention to women (Hospital de la Mujer), is aimed at the specialty of obstetrics and gynecology.

If there are comprehensive health centers that offer the same services or a large part of them, (the same as those provided by the unit under study), they are located in the states of Puebla, Mexico, and Mexico City. Among them are:

In the State of Puebla:

- Women's Hospital
- General Hospital of the North Zone Bicentennial of Independence
- Puebla University Hospital Benemérita Autonomous University of Puebla
- Hospital Angeles operator
- Oncology Unit of the Health Services.
- Oncology Unit in Puebla

In the State of Mexico and Mexico City:

- ISSEMYM State Oncology Center
- Regional Hospital of High Specialty of Ixtapaluca
- ABC Medical Center
- COI Centro Oncológico Internacional S.A. de C.V. federal District
- FUCAM A.C
- Foundation for Women I.A.P.
- General Hospital of Mexico
- General Hospital of Mexico Dr. Eduardo Liceaga
- National Cancer Institute

### 2.9. Distribution Channels

There will only be one medical unit in the state of Tlaxcala, therefore; it will be the only point of care for medical treatment in breast diseases.

### 2.10. Commercialization

An important aspect for the success of any project to be undertaken is marketing. It should start at the beginning of construction. It is advantageous to start the publicity process before the inauguration of such a unit; in order to ensure that the minimum number of patients is necessary to start and, in turn, new patients are incorporated.

The service that the unit under study will offer is intended and directed to all social and economic strata. It will be decided to commercialize the service through the regional and national press using the main newspapers and advertisements from major magazines. Information brochures will be distributed jointly in the waiting rooms of first and second level hospitals in the state. It is necessary to include advertising costs in the general



budget, since this is what ensures that we have a good level of patients.

- The Sun of Tlaxcala
- Synthesis Newspaper
- The Tlaxcala press
- Faces Magazine

#### 2.10. Promotion

The variety of treatments that will be available in the Medical Unit under study means that the care team has many options to develop a personalized treatment plan that is adapted to each case. Packages will be promoted depending on the stage of the patient's health.

Diagnostic - analysis - treatment promotions will be offered. This promotion will be carried out through the website, through social networks, newspapers, magazines, and infographics distributed throughout the state.

#### 3. Conclusion:

It was possible to determine that the investment project would have an arrival in the market of specialized health services since, although it was verified that there are competitors, they are not within the state and do not offer the specialized services that UMEPAM provides in a single installation.

The demand for specialized health services in breast diseases in the region is unsatisfied, since the existing centers that are located in the states of Puebla and Mexico do not effectively cover what is required by the state market. The number of people who are diagnosed with some breast disease is fifteen hundred, and of them, over two hundred result with breast cancer. This figure is interpreted as the need for a unit of this kind to attend to those diagnosed, without having to resort to other states for medical care.

The wide variety of medical services is highly demanded and allows accurate and effective diagnoses, as a result of the use of advanced technology and professionalism of the medical team.

#### 4. Recommendation:

Determine, through a technical and financial study, the ideal location, as well as the costs it generates for the construction of the building and the purchase of the necessary equipment to implement the Medical Unit of Specialties in Breast Pathologies for the state of Tlaxcala. In the present market study, there is a considerable number of patients who require specialized medical attention in breast pathologies that justifies the construction of said unit.

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