



## Maximizing Brazil's Oncology Drug Market

Global sales of oncology drugs exceed US\$100 billion, with emerging economies seeing some of the highest rates of demand growth in this market segment — and Brazil represents one of the largest oncology opportunities within emerging markets. But despite Brazil's progress in treating cancer, standard estimates of the patient base underestimate the opportunity, according to an L.E.K. Consulting study.

The study demonstrated that up to 45% of Brazilians with cancer are either sub-notified or may not get a proper diagnosis, since in some locations, the navigation in the health system is a challenge. Moreover, these difficulties in identifying cancer patients do not correlate with the treatment infrastructure in place in a given city, suggesting that patient identification may be improved without significant infrastructural investment.

L.E.K. research suggests that by carefully targeting selected activation points in appropriately chosen cities, pharmaceutical companies can systematically boost early patient identification, thus significantly improve treatment outcomes and increasing revenues.

### Identifying opportunities in cancer care

Within emerging-economy countries, Brazil presents one of the largest and most attractive markets for oncology products. The country has private and public payers, and both continue to increase their coverage of important oncology therapies. There is also a growing public infrastructure for cancer treatment. Throughout the country, CACON and UNACON cancer treatment centers are progressively covering the gap until the constitutional requirement of universal and equal medical coverage can be met. Additionally, private oncology clinics are expanding and consolidating.

Based on national mortality data, the country's National Cancer Institute (INCA) estimates there are about 393,000 new cases of cancer annually in Brazil (Figure 1). However, L.E.K. estimates that this figure does not include 40% to 45% of Brazilians with cancer — more than 200,000 patients per year — who are “unidentified” in the healthcare system because a correct diagnosis is not received or concluded and therefore is not included in the mortality database.

The L.E.K. incidence figure is based on comparable incidence rates for major forms of cancer in the United States, adjusted for age, gender and race in Brazil (see Figure 2). GLOBOCAN, an international agency that conducts cancer research, has a slightly higher incidence than does INCA, at 438,000 cases (all cases excluding nonmelanoma skin cancer, 2012); however, this is still lower than the number based on a global benchmark location such as the U.S. We tested the hypothesis using the U.K. incidence data, and the results are not materially different from the U.S. benchmark.

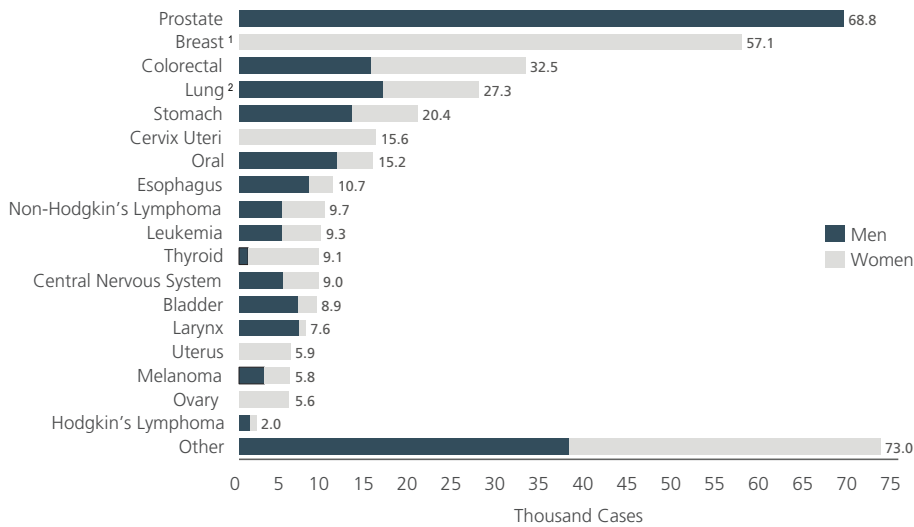
*Maximizing Brazil's Oncology Drug Market* was written by **Marcelo do Ó**, Partner, and **Rafael Freixo**, Associate Consultant, in L.E.K. Consulting's Biopharma and Life Sciences practice. Marcelo and Rafael are based in São Paulo, Brazil.

For more information, contact [lifesciences@lek.com](mailto:lifesciences@lek.com).

Figure 1

## Cancer incidence according to location and sex, 2014

According to INCA, there are 393,4301 new cases of cancer in Brazil every year.



<sup>1</sup> Excludes nonmelanoma skin cases. In total there are 575,570 cases

<sup>2</sup> Includes Lung, Trachea and Bronchia

Sources: INCA 2014 cancer incidence estimates, L.E.K. analysis

Research by the World Health Organization's International Agency for Research on Cancer has shown that important differences in incidence rates across countries do exist for some types of cancer, such as melanoma.

However, the large and consistent gaps between incidence rate estimates in the United States and Brazil for breast cancer, prostate cancer, leukemia and other cancer types suggest significantly lower rates of patient identification and diagnosis in Brazil. Differences in rates among Brazilian cities and regions also illustrate the difficulties that the lack of access creates in correct diagnosis.

In breast cancer, for example, which has a high level of public awareness, L.E.K. estimates that 46% of Brazil's potential patients remain unidentified. In leukemia, a much rarer condition, 54% of patients are unidentified, according to the L.E.K. analysis.

The L.E.K. data also indicate that certain types of cancer — stomach, cervical/uterine, esophageal and laryngeal — are identified at higher rates in Brazil than in the U.S. The higher Brazilian incidence rate may be related to diet, higher levels of HPV infection and other local factors in these cases.

Given the differences between Brazil and the U.S., and the differences across Brazilian regions, the challenge for the Brazilian health system is to quickly identify and diagnose these cancer patients who are now falling between the cracks, and provide them with proper treatment. In this area, pharmaceutical companies and health providers have converging interests. Given the crucial patient benefits that oncology products provide, pharmaceutical

firms have economic incentives to go the extra mile to support patient identification efforts.

## Understanding the local gaps in identification

The L.E.K. study looked in detail at barriers to patient identification for specific types of cancer in cities and states across the country, and found important differences in patient identification success rates in different locations (see Figure 3).

Surprisingly, the analysis also revealed that success in patient identification is not related to the infrastructure available for cancer treatment — so the lack of infrastructure does not provide a clear reason why patients are not finding their way into treatment (see Figure 3).

Instead, the problem may be driven by ineffective identification of cancers by primary care physicians, the lack of availability of

timely diagnostic services, the presence of non-cancer specialists and other factors. (See Figure 4 for some examples of steps where patients may drop out from the identification and diagnosis process.)

Local, city and state practices dramatically affect this identification problem. In Brazil, patient navigation in the public healthcare system is supported by a process called "regulação." Sometimes this process is very sophisticated — integrating information systems, call centers and physician supervision — and able to speed or slow the flow of patient identification and diagnosis depending on risk of the condition and other key considerations.

However, the level of implementation of such "regulação" systems varies across different cancer conditions, cities and states. Often, if these systems can overcome one bottleneck to patient identification, another one will emerge and delay the patient's pathway to proper healthcare.

At the same time, some cities in Brazil achieve better patient identification rates for certain cancer types than do cities in the United States. These accomplishments don't happen by chance; specific actions (best practices) in the local healthcare environments enable them. One example is a system called "Disk-Onco" in the state of Rio Grande do Sul, which provides proper information to physicians on how to help patients who may have cancer. (See Case Study: Rio Grande do Sul state on page 4)

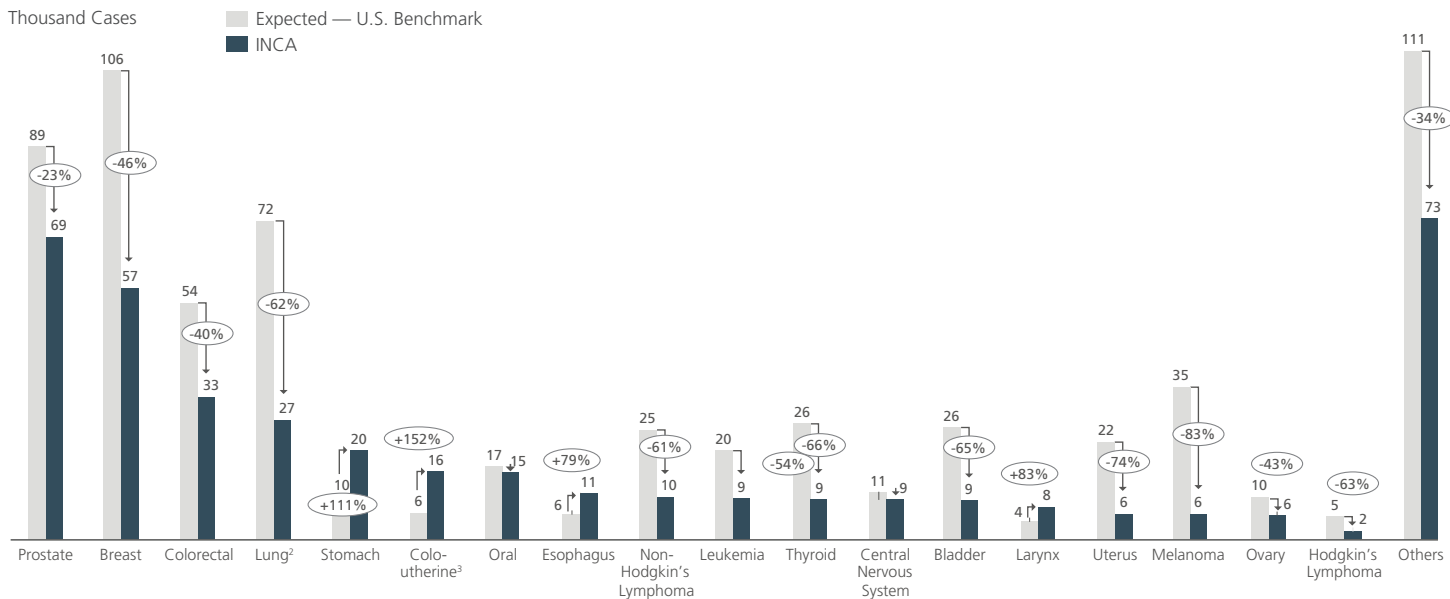
## Filling the gaps with strategies that fit local realities

Pharmaceutical companies have a long-standing tradition of working alongside different health stakeholders to shape the

Figure 2

## Age and sex adjusted<sup>1</sup> expected number of cases in Brazil

The U.S. benchmark points to a much larger number (~290,000 unidentified patients) of cases than INCA estimates.



<sup>1</sup> Adjusted to the Brazilian age and sex profiles at the state level

<sup>2</sup> Small cell and non-small cell lung cancer

<sup>3</sup> The HPV information center indicates 18.4 cases/100,000 women in 2014, or 18,503 new cases

Sources: INCA, National Cancer Institute, L.E.K. analysis and Cervical Human Papillomavirus Prevalence in 5 Continents: Meta-Analysis of 1 Million Women with Normal Cytological Findings. Laia Bruni et al., JID 2010:202 (15 December); HPV information center

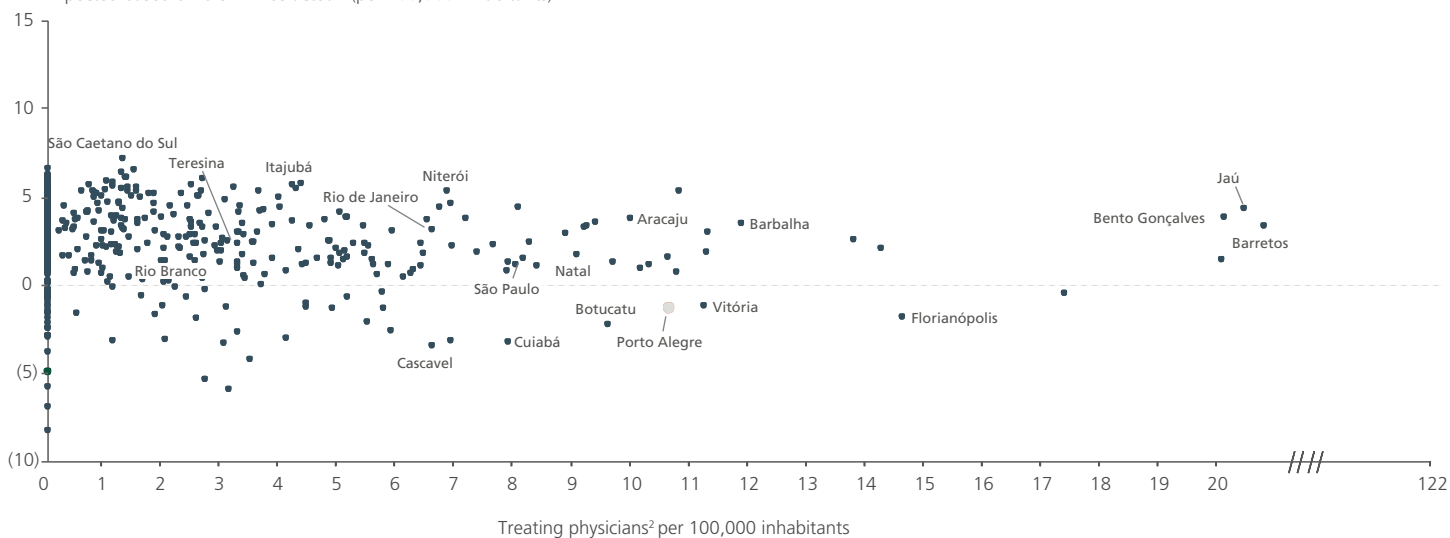
Figure 3

## Lymphoid Leukemia patients in Brazil, 2014

There is no clear correlation between tertiary care and diagnoses.

Age and gender adjusted vs. U.S. benchmark (per 100,000 inhabitants)

Expected based on U.S. minus actual<sup>1</sup> (per 100,000 inhabitants)



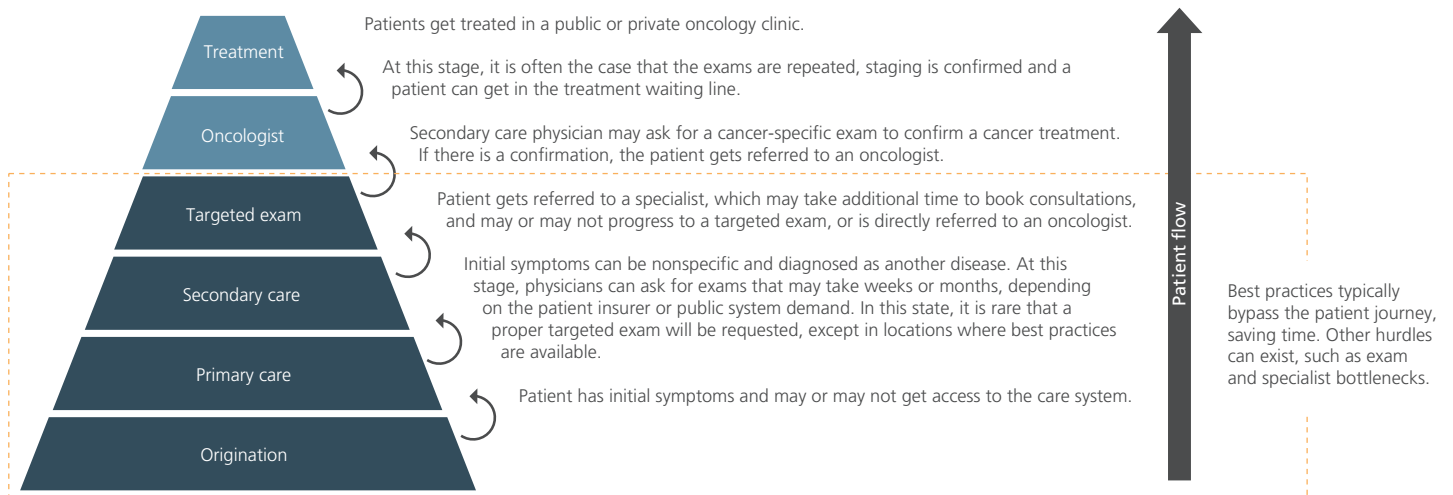
<sup>1</sup> For cities > 50,000 inhabitants

<sup>2</sup> Includes: oncologists, cancerologists, hematologists, per 100,000 inhabitants

Sources: DATASUS, INCA, ANS, CNES, SEER, L.E.K. analysis

**Figure 4**  
**Patient identification challenges**

*Patients have to navigate a long system with many different steps and geographies, where multiple things can go wrong, consuming precious time.*



healthcare environment toward patient care that can optimize treatment outcomes. To effectively seize opportunities in Brazil, companies should systematically:

### Understand city-level practice gaps

- Determine the reasons that patients aren't identified correctly and/or can't access treatment centers in certain cities
- Understand best practices in cities that successfully provide these services, and how these best practices can be applied in similar cities
- Pinpoint the cities where the largest pools of potential patient identification opportunities exist, and study the local bottlenecks in these cities

### Define city segments that can accommodate similar solutions

- Study interventions in these cities that would allow patients to overcome all hurdles for access to care, considering activation points such as improving access to surgical biopsies or speeding the handling of immunochemistry analyses
- Create proper business cases to focus resource where the best economics are present
- Analyze the required investment for cities that might profit from low-cost activation points
- Bet on city-level opportunities where it makes economic sense

Properly designed, such city-level programs will improve the identification of Brazilian cancer patients and help to give them quick access to appropriate care. These programs could make a major contribution to cancer care in the country, improving treatment outcomes, saving lives and, ultimately, increasing revenues for oncology drugs.

### Case study Rio Grande do Sul state

Across the state of Rio Grande do Sul, the Disk-Onco (dial-onco) service for advising primary care physicians has been well-established for years. That's one reason that the state has achieved the best patient identification rates in the country for cancer in general.

The state's healthcare system recognizes that potential cancer cases must be addressed efficiently to avoid systemic bottlenecks. Processes are in place to secure proper care for individual cases. These processes are widely implemented and directly influence the patient's journey toward treatment. For example, any doctor who suspects a patient has an aggressive cancer type can actively place that patient ahead in the diagnosis line and proactively contact the patient.

Disk-Onco is a patient navigation system, operated by senior physicians, through which referrals of patients who present with symptoms of cancer are registered and prioritized. This allows patients to overcome the access barriers to relevant specialists and diagnostic procedures. Additionally, Disk-Onco operators can modify patients' referrals in order to speed up the process.



## About the Author

Marcelo do Ó is a Managing Director and Partner in L.E.K. Consulting's São Paulo office. He has more than 20 years of experience in both the pharmaceutical and life sciences industries and in management consulting. He also has experience in the retail, healthcare, metals & mining sectors. He specializes in competitive strategy development, growth strategy and M&A.

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