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Editorial

Metastasis Breast Cancer Output Research

Martin Perez-Santos[1]* and Maricruz Anaya-Ruiz[2]

[1]Centro Universitario de Vinculación y Transferencia de Tecnología, Benemérita Universidad Autónoma de Puebla, México

[2]Centro de Investigación Biomédica de Oriente, Instituto Mexicano del Seguro Social, México

***Corresponding Author**: Martin Perez-Santos, Centro Universitario de Vinculación y Transferencia de Tecnología, Benemérita Universidad Autónoma de Puebla, Prolongación de la 24 Sur y Av. San Claudio, Ciudad Universitaria, Puebla, Mexico.

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Introduction

Breast cancer (BC) is the most commonly diagnosed cancer in women, with 1.7 million new cases annually and 520,000 deaths globally [1], and metastasis to distant organs is responsible for ~90% of this death. Metastasis is the process by which breast cancer cells spread from the primary tumor to establish colonization at distant organs, such as the bone, lung, liver, and brain. It has been estimated that 85% of patients develop metastasis of bone [2], while 60 - 70%, 50% and 15 - 35% develop metastasis to lung [3], liver [4] and brain [5], respectively.

Extensive research has been conducted to solve the problem of breast cancer, but the metastasis solution still remains uncertain. Faced with this dilemma, scientific research evaluation has as purpose monitoring of ongoing research initiatives to assess the efficiency and effectiveness with which they are being implemented, and to determine the extent to which they are achieving their targeted objectives, and to recommend adjustments. On this premise, the present study was designed to determine the world share of publications in the field of bone-, lung-, liver- and brain-metastasis for breast cancer from 2000 to 2016.

Discussion

The trend of papers published on breast cancer-originated metastasis can be seen in figure 1. It is notable that the trend in publications concerning bone metastasis is above the trend of lung metastasis, whereas the trends of liver and brain metastasis are very similar. It is also important to emphasize that in the last years the production of research publications tries to fulfill the magnitude of the problem. On the other hand, the leading countries in research on the several target organs for metastasis are represented by the United States, followed by Germany, Japan, Italy, United Kingdom, China, Canada, France, Australia and South Korea (Table 1). Additionally, the leading institutions in this type of research were the University of Texas AM Anderson Cancer Center (USA), Harvard Medical School (USA), Memorial Sloan-Kettering Cancer Center (USA), National Cancer Institute (USA), University of Toronto (Canada), INSERM (France), and Dana-Farber Cancer Institute (USA).

Country	Bone	Lung	Liver	Brain
United States	1824	1728	847	1058
Germany	520	272	291	256
Japan	463	349	270	191
Italy	482	275	225	203
United Kingdom	549	245	213	149
China	337	490	168	120
Canada	419	222	118	152
France	302	192	168	164
Australia	182	107	73	65
South Korea	111	129	60	98

Table 1: *Global Publication Output of Top 10 Most Productive Countries in "Bone-, lung-, liver-, and brain-metastasis in breast cancer", 2000 - 2016.*

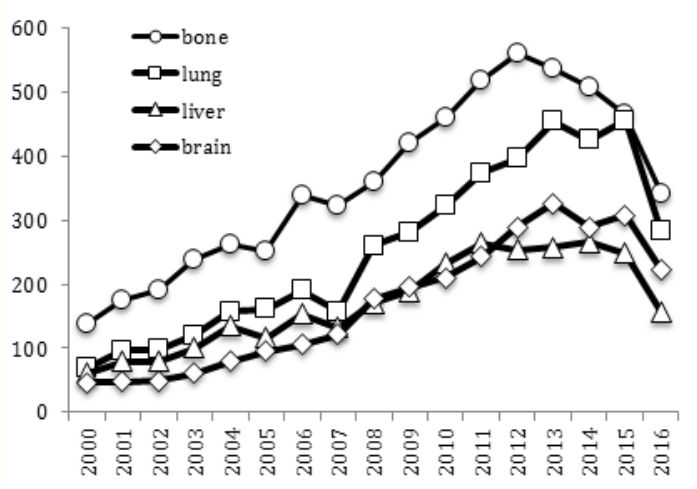

Figure 1: *Number of articles published on bone-, lung-, liver-, and brain-metastasis of breast cancer in the period 2000 to 2016 (Available online: www.scopus.com).*

Conclusion

To bridge the gaps between metastasis breast cancer research and policy it is necessary to use knowledge translation strategies, where one of the first steps is the generation of scientific knowledge produced by research. To address the problem of metastasis breast cancer, it is necessary to establish as an initial step the implementation of knowledge translation strategies and thus lead to a cancer research policy where research priorities are established. It is also vital to increase the participation of other countries, different from the developed countries, in metastasis breast cancer research so as to include a greater heterogeneity of patients that lead to a better understanding of the risk factors that lead to the development of one or the other Type of metastasis.

Bibliography

1. Ferlay J., *et al*. "Cancer incidence and mortality worldwide: sources, methods and major patterns in GLOBOCAN 2012". *International Journal of Cancer* 136.5 (2015): E359-E386.
2. Cox TR., *et al*. "The hypoxic cancer secretome induces pre-metastatic bone lesions through lysyl oxidase". *Nature* 522.7554 (2015): 106-110.
3. Cao H., *et al*. "Hydrophobic interaction mediating self-assembled nanoparticles of succinobucol suppress lung metastasis of breast cancer by inhibition of VCAM-1 expression". *Journal of Controlled Release* 205 (2015): 162-171.
4. Diamond JR., *et al*. "Hepatic complications of breast cancer". *Lancet Oncolology* 10.6 (2009): 615-621.
5. Witzel I., *et al*. "Breast cancer brain metastases: Biology and new clinical perspectives". *Breast Cancer Research* 18.1 (2016): 8.

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