



Editorial Special Issue "New Advances in Breast Imaging"

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Breast cancer (BC) is the most common cancer in women of all ages, with more than 2 million diagnoses every year and a high economic and psychological impact on both the health care system and the population [1,2]. Additionally, male breast cancer should be considered, because even though it represents less than 1% of all male malignancies, its incidence has increased by 20–25% in the past few decades [3].

Breast imaging is one of the most exciting subspecialties in radiology. The importance of early diagnosis is widely confirmed, and the modalities of breast cancer screening are highly debated, with several guidelines proposed in the world [4,5].

In these challenging times, a well-established diagnostic–therapeutic care pathway (DTCP) is fundamental to guarantee an essential level of care since the COVID-19 pandemic has caused permanent changes to the practice of medicine [6,7].

Currently, the need for personalized medicine has also changed our vision of the field, giving even more importance to multimodality and to the integration of both artificial intelligence and human resources. Consequently, evaluating the application of radiomics could be of particular interest. Increased mammographic breast density is a well-established risk factor for the development of breast cancer, regardless of age or ethnic background [8]. The current gold standard for categorizing breast density consists of a radiologist estimation according to the American College of Radiology (ACR) Breast Imaging Reporting and Data System (BI-RADS) criteria [9]. It could be useful to establish the effect of the automated evaluation of breast density with the currently available software. In addition, evaluating how breast cancers are depicted by artificial intelligence-based computer-assisted diagnosis (AI-CAD) could also be of relevant interest.

Furthermore, examining the real impact of the most recent advancements in standard imaging techniques on breast cancer prevention, such as digital breast tomosynthesis (DBT) and automated breast ultrasound (ABUS), could be incredibly challenging, especially in women with dense breasts. In addition, contrast-enhanced spectral mammography (CESM) could be considered a true alternative to the most expensive magnetic resonance imaging (MRI) [10,11]. On the other hand, the evaluation of fast MRI could have a great impact on breast cancer prevention, especially in women at high risk [12].

This Special Issue aims to present and discuss the most recent advancements in breast imaging in order to strengthen the concept that breast imaging is a specific area that requires specific training and that a multimodality approach is the solution to guarantee a complete diagnosis for patients.

Original research articles and reviews are welcome. Research areas include (but are not limited to) all the aforementioned topics. Articles on breast cancer screening programs are welcome, especially those dealing with DBT and ABUS.

Finally, articles on breast interventional radiology, with particular regard to vacuumassisted biopsy or excision systems, are also welcome.

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References

- 1. World Health Organization. The Global Breast Cancer Initiative. 2021. Available online: https://www.who.int/multi-media/ details/the-global-breast-cancer-initiative-(gbci) (accessed on 5 May 2022).
- 2. Tari, D.U.; Santonastaso, R.; Pinto, F. Consequences of the impact of Covid-19 pandemic on breast cancer at a single Italian Institution. *Explor. Target Antitumor. Ther.* **2022**, *in press*.
- Tari, D.U.; Morelli, L.; Guida, A.; Pinto, F. Male Breast Cancer Review. A Rare Case of Pure DCIS: Imaging Protocol, Radiomics and Management. *Diagnostics* 2021, 11, 2199. [CrossRef] [PubMed]
- 4. Center for Disease Control and Prevention. 2022. Available online: https://www.cdc.gov/cancer/breast/pdf/breast-cancer-screening-guidelines-508.pdf (accessed on 5 May 2022).
- 5. European Commission Initiative on Breast Cancer. 2022. Available online: https://healthcare-quality.jrc.ec.europa.eu/ecibc/european-breast-cancer-guidelines (accessed on 5 May 2022).
- Tari, D.U.; Santarsiere, A.; Palermo, F.; Morelli, C.D.; Pinto, F. The management of a breast unit during the COVID-19 emergency: A local experience. *Future Oncol.* 2021, 17, 4757–4767. [CrossRef] [PubMed]
- 7. Maio, F.; Tari, D.U.; Granata, V.; Fusco, R.; Grassi, R.; Petrillo, A.; Pinto, F. Breast Cancer Screening during COVID-19 Emergency: Patients and Department Management in a Local Experience. *J. Pers. Med.* **2021**, *11*, 380. [CrossRef] [PubMed]
- Gastounioti, A.; Pantalone, L.; Scott, C.G.; Cohen, E.A.; Wu, F.F.; Winham, S.J.; Jensen, M.R.; Maidment, A.D.A.; Vachon, C.M.; Conant, E.F.; et al. Fully Automated Volumetric Breast Density Estimation from Digital Breast Tomosynthesis. *Radiology* 2021, 301, 561–568. [CrossRef] [PubMed]
- 9. D'Orsi, C.J.; Sickles, E.A.; Mendelson, E.B.; Morris, E.A. ACR BI-RADS[®] Atlas, Breast Imaging Reporting and Data System, 5th ed.; American College of Radiology: Reston, VA, USA, 2013.
- Feng, L.; Sheng, L.; Zhang, L.; Li, N.; Xie, Y. Comparison of Contrast-Enhanced Spectral Mammography and Contrast-Enhanced MRI in Screening Multifocal and Multicentric Lesions in Breast Cancer Patients. *Contrast Media Mol. Imaging* 2022, 2022, 4224701. [CrossRef]
- 11. Bicchierai, G.; Di Naro, F.; De Benedetto, D.; Cozzi, D.; Pradella, S.; Miele, V.; Nori, J. A review of Breast Imaging for Timely Diagnosis of Disease. *Int. J. Environ. Res. Public Health* **2021**, *18*, 5509. [CrossRef] [PubMed]
- 12. Bougias, H.; Stogiannos, N. Breast MRI: Where are we currently standing? J. Med. Imaging Radiat. Sci. 2022, 53, 203–211. [CrossRef] [PubMed]