

Mapping Facilities, Equipment and Trained Personnel of Radiotherapy in Greece

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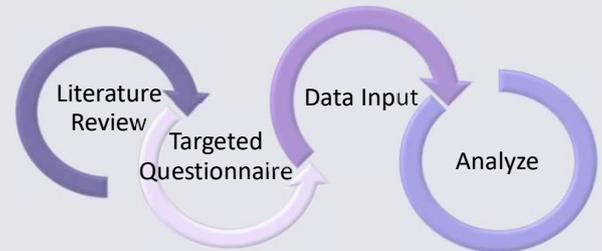
Introduction

Radiotherapy demonstrates an important role in achieving high quality cancer treatment, either as monotherapy or in an adjuvant or neoadjuvant role (Florindi, et. al., 2017). With the outbreak of the Covid-19 pandemic many radiotherapy units were either called to temporarily suspend their operations or converted to treatment units for Covid-19 patients. despite the problems of patient access to radiotherapy services at the start of the pandemic, these were subsequently addressed to a significant extent, with the result that today a relatively small proportion of oncology patients report some difficulty or inability to access them.

The present study provides a detailed and transparent mapping of the radiotherapy sector in Greece, both in terms of facilities and radiotherapy equipment, as well as in terms of staffing of the existing departments.

Methods

Updated data referring to the facilities, trained personnel and equipment of Radiotherapy in Greece were drawn from the National Organization for the Provision of Health Services (EOPYY), the Oncology Centres, from radiation oncologists and other experts in the field, were obtained on May 2023.



Results

According to the data provided to us, there are 57 radiotherapy units in operation in Greece, of which 32 units belong to the public sector and 25 to the private sector and are installed in 30 public and private hospitals.

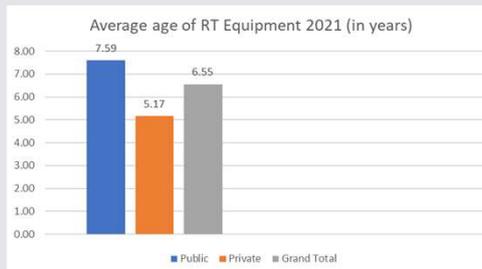


Figure 2. Average age of RT equipment

Regarding the human resources of the Radiotherapy Departments, 114 doctors, 63 Radiophysicists and 144 Technologists are employed.

Health Administrative Region (YPE)	Doctors	Radiophysicists	Technologists
1st & 2nd YPE	57	30	76
3rd YPE	23	12	37
4th YPE	4	3	5
5th YPE	6	5	6
6th YPE	17	9	14
7th YPE	7	4	6
Grand Total	114	63	144

Table 1. Distribution of Radiotherapy Staff in each health administrative region (YPE).

The distribution of RT units is very unequal not only among various regional territories but also within them, resulting in a heavy concentration mainly in Attica region and leaving the regions of Central Greece, North Aegean, Peloponnese, South Aegean, West Macedonia and Ionian Islands with limited access (WHO, 2018).

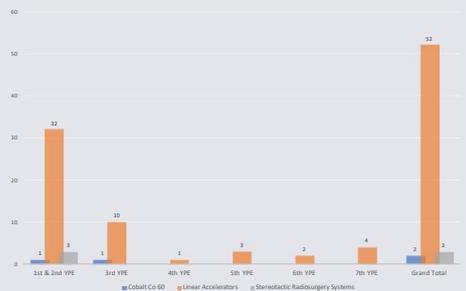


Figure 3. Distribution of RT units in each administrative region (YPE)

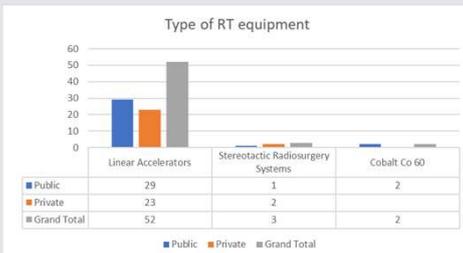


Figure 1. Type of RT Equipment

Until 2016, the vast majority of RT equipment (mainly LINACs and Co-60 units) in the public sector in Greece was more than 15 years old. In 2017, this situation changed radically as a result of the Stavros Niarchos Foundation donating 10 new LINACs to replace old equipment in seven public hospitals.

Conclusions

With a total of 57 radiotherapy machines available in the country, and a ratio of 0.54376 units per 100,000 inhabitants, Greece does not meet the recent recommendations of COCIR "golden rule" - target of 7 machines per million inhabitants (COCIR, 2019). The distribution of RT units in the different administrative regions (and within them) is very unequal resulting in limited access. In terms of staffing and staff mix, the level is well below European standards and guidelines for both the private and public sectors. Understaffing is one of the reasons that while in the rest of Europe and the US radiotherapy is the main treatment for more than 60% of cancer patients, this percentage in Greece is estimated to be around 30%. As a result, the health care system in Greece is forced to pay for more expensive treatments (e.g. surgery and extensive chemotherapy), which in many cases are less effective.

References

- Florindi, F., De Lorenzo, K., Apostolidis, et al. Value of innovation in oncology: The position of European cancer patients on access to innovative treatments. *Journal of Clinical Oncology* 2017 35:15_suppl, e18021-e18021
- COCIR, 2019. Medical Imaging Equipment Age Profile & Density, Executive Summary Edition 2019
- WHO, 2018. Rationalizing distribution and utilization of high value capital medical equipment in Greece, Assessment Report, WHO/EURO:2018-3068-42826-59769

Acknowledgements

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