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AIRO2022

Radioterapia di precisione per un'oncologia innovativa e sostenibile

BOLOGNA, 25-27 NOVEMBRE
PALAZZO DEI CONGRESSI

 Associazione Italiana
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MANAGEMENT OF CARDIAC IMPLANTABLE DEVICES DURING RADIATION THERAPY: A SINGLE CENTRE EXPERIENCE

Dr. Riccardo Villa and Dr. Chiara Lorubbio



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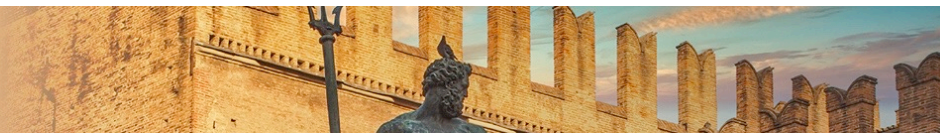


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DICHIARAZIONE

Relatore: RICCARDO VILLA

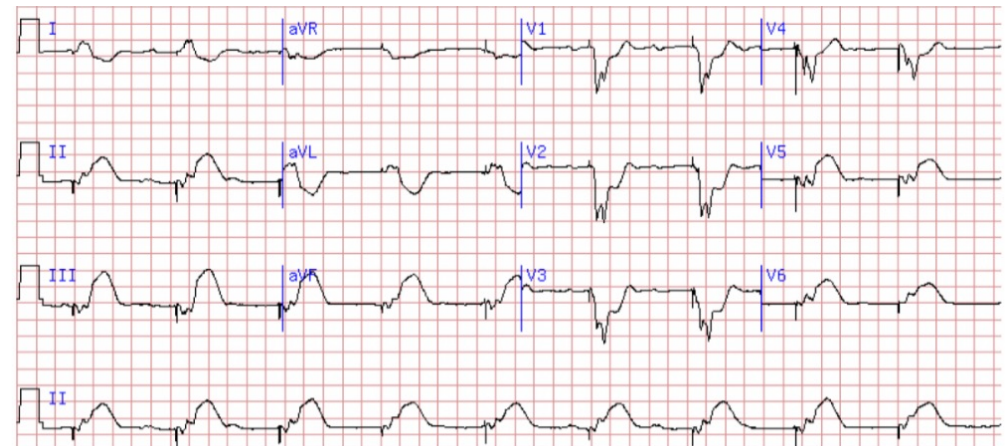
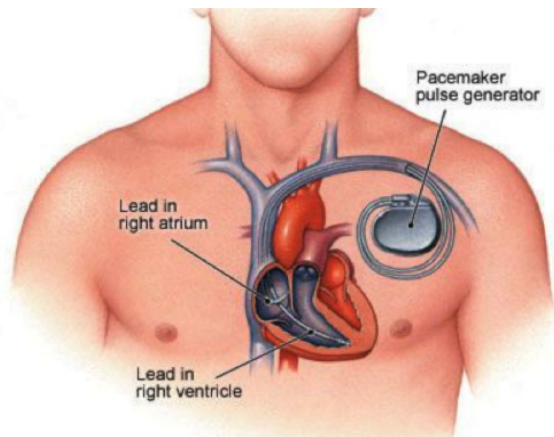
Come da nuova regolamentazione della Commissione Nazionale per la Formazione Continua del Ministero della Salute, è richiesta la trasparenza delle fonti di finanziamento e dei rapporti con soggetti portatori di interessi commerciali in campo sanitario.

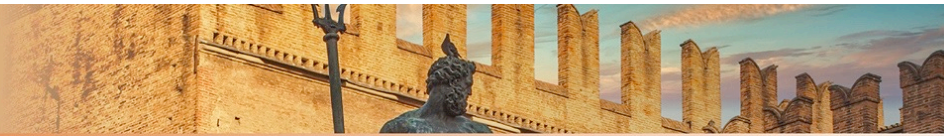
- Posizione di dipendente in aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Consulenza ad aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Fondi per la ricerca da aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Partecipazione ad Advisory Board **(NIENTE DA DICHIARARE)**
- Titolarità di brevetti in compartecipazione ad aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Partecipazioni azionarie in aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Altro



AIMS: Over the past few years, an increasing number of cardiac implantable electronic devices (CIEDs), including both pacemakers (PM), implantable cardiac defibrillators (ICD) and loop recorders (LR), has been used to manage various type of cardiac arrhythmias. Considering that the number of radiation therapy (RT) treatments is increasing, to ensure a safe management of all the devices has become mandatory. The aim of this work is to explain how CIEDs are managed in a single centre experience.

METHODS: We evaluated and described our activity from the end of June 2010 to September 2021





1

• **First radiotherapy visit:**

- Information gathering related to the implantable device and explanation of the procedure to the Patient

2

• **Treatment scheduling:**

- Arrangement of cardiology examination at the same time as simulation CT scan
- Time slots agreed with Cardiology Colleagues for possible monitoring
- No more than 2-3 treatments of patients with PM/ICD per day

3

• **TC simulation:**

- Signature of informed consent specific to implantable devices
- Verification of need to adjust CT scan (reduce steps on device, device acquisition or not)
- Verification and acquisition of Patient documentation
- Cardiology examination (risk stratification based on: device brand, PM dependence, treatment site, and expected dose to device)

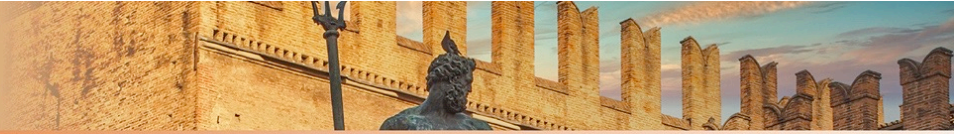
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• **Treatment planning:**

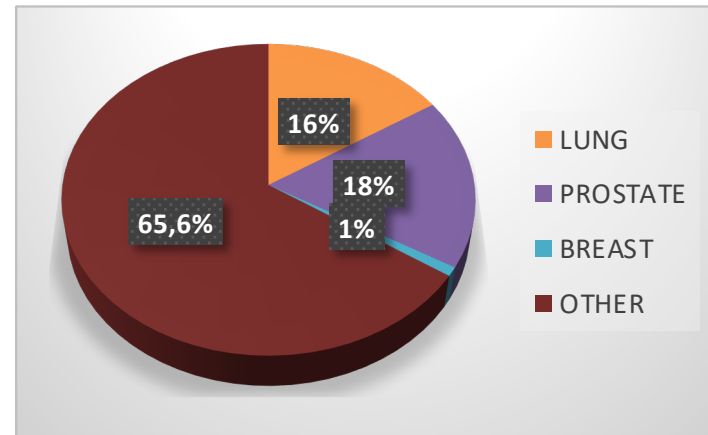
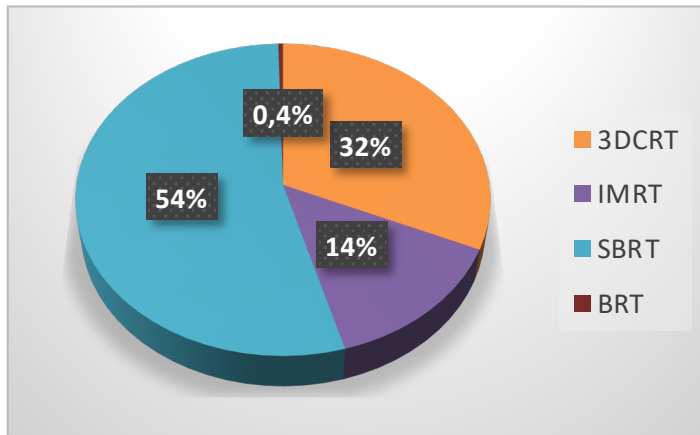
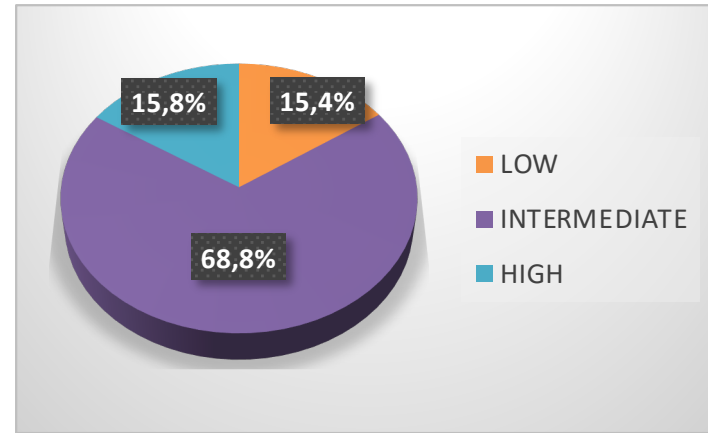
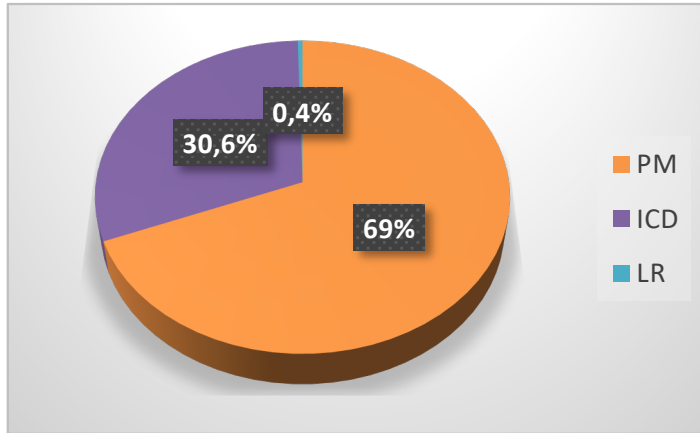
- Verify energies used (X6MV-X18MV) and any critical doses to the device that would lead to the need to vary the radiotherapy technique

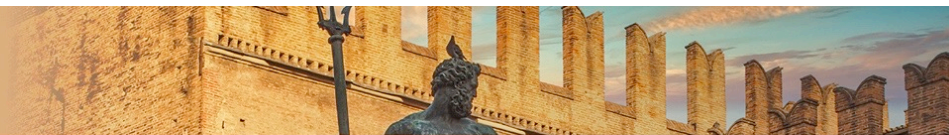
• **Treatment delivery:**

- Verify documentation in possession and informed consent
- Perform monitoring based on what was assessed by the Cardiologist Colleague during risk stratification



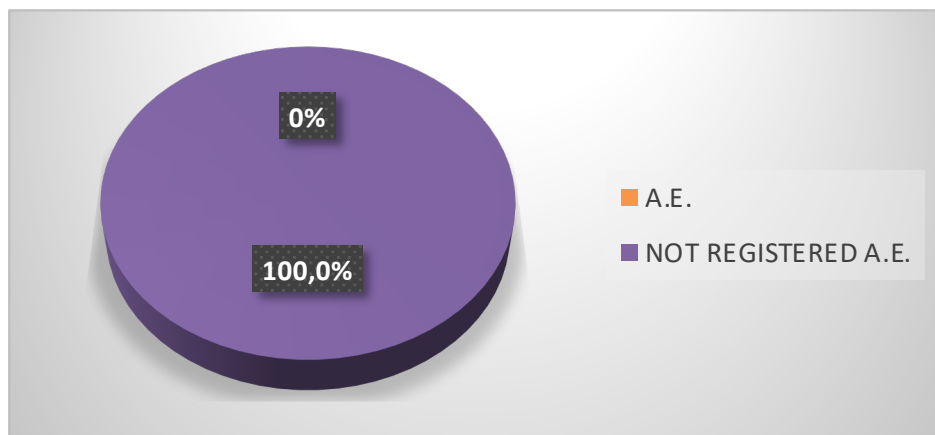
RESULTS 1:
 215 Pts
 (2010-2021)



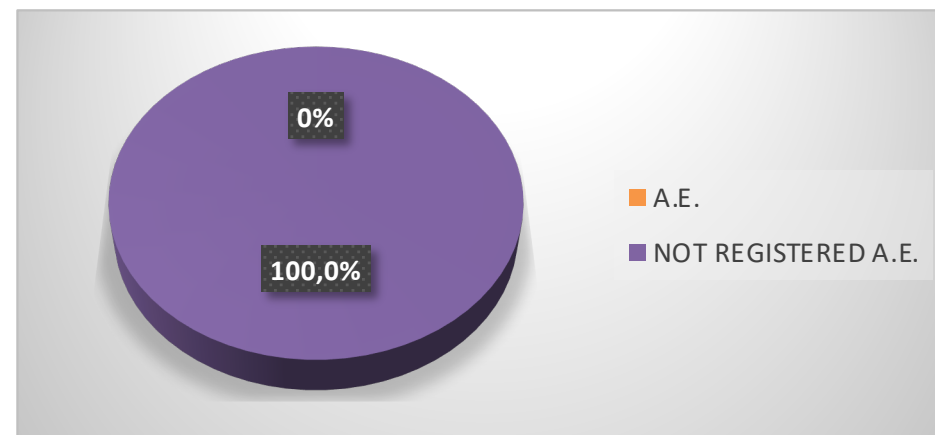


RESULTS 2:
215 Pts
(2010-2021)

Undergoing RT:



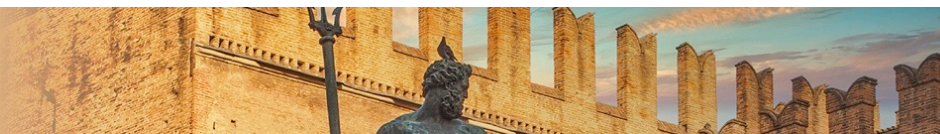
After RT:



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European Heart Journal (2022) **00**, 1–133
<https://doi.org/10.1093/eurheartj/ehac244>

ESC GUIDELINES

2022 ESC Guidelines on cardio-oncology developed in collaboration with the European Hematology Association (EHA), the European Society for Therapeutic Radiology and Oncology (ESTRO) and the International Cardio-Oncology Society (IC-OS)

**Developed by the task force on cardio-oncology of the European
Society of Cardiology (ESC)**

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CONCLUSIONS: Our Institute CIEDs management is based on a multidisciplinary team and on the training of the RT staff. This method appears to be safe and permits the access to the RT to all the patients with CIEDs; however, further study is deemed useful to update the current knowledge to the quick progress in technologies.



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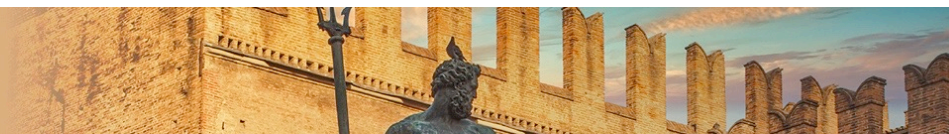


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THANKS FOR YOUR ATTENTION



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