

Administrative Management

Angelica Facchetti

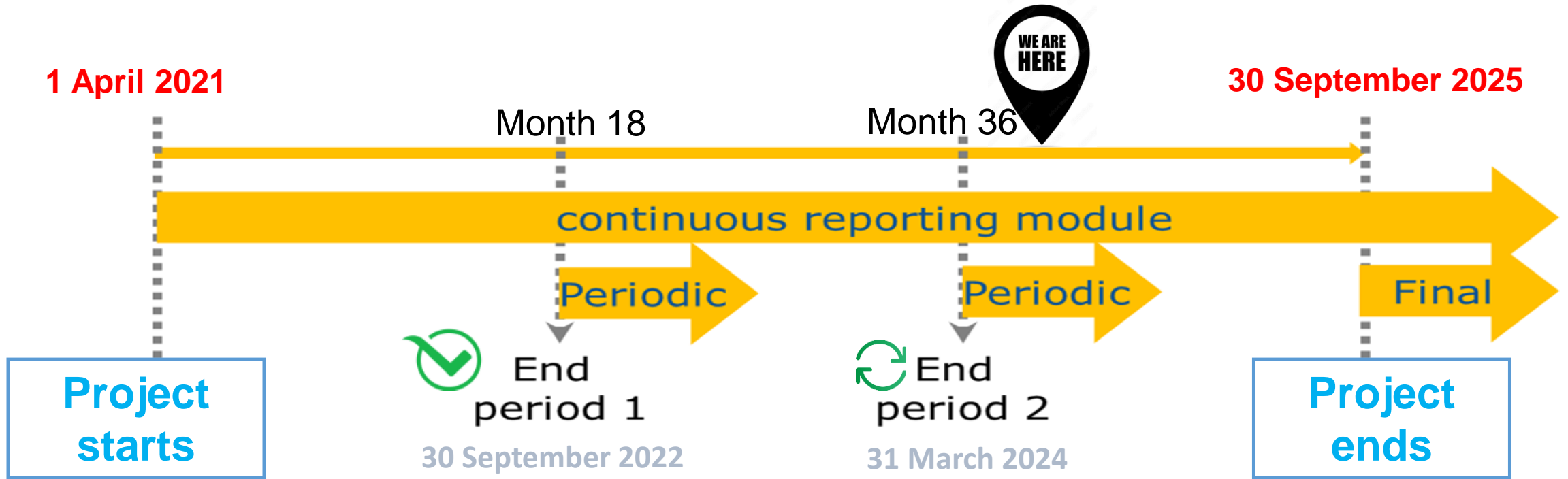
7th General Assembly meeting
– Marburg, May 23rd, 2024

Vila Vita Rosenpark Hotel




This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101008548


Where are we?



Periodic reporting module – 2nd period

Activated **after the end** of each reporting period 



All beneficiaries complete their own **Financial Statement** and their contribution to the **Technical Part** of the Periodic Report. 



Beneficiaries e-sign and submit their Financial Statements to the Coordinator.
The Coordinator approves the elements of the Periodic Report & submits to the EU Services.



EU services review the submitted Periodic Report and accept or reject it.



The PO/ FO may request additional documents/ justifications/ explanations



Approval and Payment

THANK YOU



| Grant Management | | Project Periodic Report | | | | | | | | | | | |
|------------------------------------------------|-----------------------|-------------------------|-----------------------------------------|------------|----------------|--------------|-------------------------------|------------------------------------|------------|----------------|--------|-----------------------|----------------------|
| 101008548 (HITRIplus) | RIA | Summary for publication | Deliverables Ethics, DWP, Other Reports | Milestones | Critical Risks | Publications | Disseminat... and Communic... | Intellectual property rights (IPR) | SWE Impact | Infrastruct... | Gender | Tech. Report (Part B) | Financial Statements |
| Period No: 2 | Duration (months): 18 | ✓ | i | i | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | i | i |
| Reporting Period : [01 Oct 2022 - 31 Mar 2024] | | | | | | | | | | | | | |



Project Number: 101008548
Project Acronym: HITRIplus
Project title: Heavy Ion Therapy Research Integration



Periodic Technical Report Part B

Period covered by the report: from 01/10/2022 to 31/03/2024

Periodic report: 2nd



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101008548



| | |
|------------------------------------------------------------------------------------------------------------------------|----|
| 1. EXPLANATION OF THE WORK CARRIED OUT BY THE BENEFICIARIES AND OVERVIEW OF THE PROGRESS | 4 |
| 1.2. Explanation of the work carried out by each Work Package | 13 |
| 1.2.1. Work Package 1 - Project Management | 15 |
| 1.2.2. Work Package 2 - NA1 - Networking and communication, dissemination and outreach | 19 |
| 1.2.3. Work Package 3 - NA2 - Clinical networking | 33 |
| 1.2.4. Work Package 4 - NA3 - Innovation, technology transfer, industry relation | 36 |
| 1.2.5. Work Package 5 - NA4 - Education and training | 38 |
| 1.2.6. Work Package 6 - Transnational Access (TA) | 41 |
| 1.2.7. Work Package 7 - JRA1- Advanced accelerator and gantry design | 47 |
| 1.2.8. Work Package 8 - JRA2 - Superconducting magnet design | 57 |
| 1.2.9. Work Package 9 - JRA3 - Advanced beam delivery | 64 |
| 1.2.10. Work Package 10 - JRA4 - Multiple energy extraction system | 69 |
| 1.2.11. Work Package 11 - JRA5 - Controls and Safety | 71 |
| 1.2.12. Work Package 12 - JRA6 - Radiobiological Dosimetry and QA | 73 |
| 1.2.13. Work Package 13 - Ethics requirement | 75 |
| 1.3. Impact | 75 |
| 1.4 Access provisions to Research Infrastructures | 81 |
| 1.4.1 Description of the publicity concerning the new opportunities for access | 81 |
| 1.4.2 Description of the selection procedure | 82 |
| 1.4.3 Description of the Trans-National Access activity | 82 |
| 1.4.4 Scientific output of the users at the facilities | 88 |
| 1.4.5 User meetings | 90 |
| 1.5 Resources used to provide access to Research Infrastructures | 90 |
| 2. UPDATE OF THE PLAN FOR EXPLOITATION AND DISSEMINATION OF RESULT | 91 |
| 3. UPDATE OF THE DATA MANAGEMENT PLAN | 91 |
| 3.1 Follow-up of recommendations and comments from previous review | 92 |
| 4. DEVIATIONS FROM ANNEX 1 AND ANNEX 2 | 96 |
| 4.1 Tasks | 96 |
| 4.2 Use of resources | 96 |
| 4.2.1 Unforeseen subcontracting (if applicable) | 99 |
| 4.2.2 Unforeseen use of in kind contribution from third party against payment or free of charges (if applicable) | 99 |

Horizon 2020
 Co 101008548

Project Number: 101008548
Project Acronym: HITRIplus
Project title: Heavy Ion Therapy Research Integration

Periodic Technical Report Part B
Annex 1

Period covered by the report: from 01/10/2022 to 31/03/2024

Periodic report: 2nd

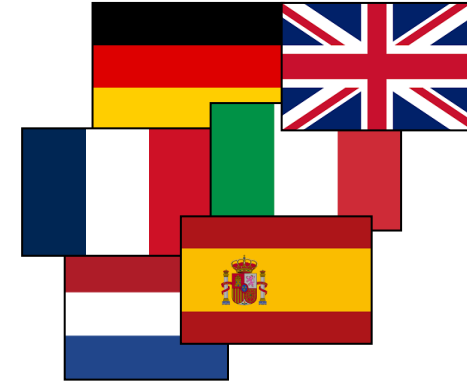


This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101008548

TNA: Trans National Access

Research

7 accesses completed
in 2 RP



Clinical

9 accesses completed in 2 RP
19 clinical researchers
10 countries



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101008548

Project Number: 101008548
Project Acronym: HITRIplus
Project title: Heavy Ion Therapy Research Integration

Periodic Technical Report Part B
Annex 1

Period covered by the report: from 01/10/2022 to 31/03/2024

Periodic report: 2nd



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101008548

TNA: Trans National Access

“Understanding the technology and medical indications specific to Carbon ion therapy prior to sending our own patients there is of paramount importance. Witnessing first-hand the comprehensive approach your team takes in providing state-of-the-art treatment to patients has not only broadened our knowledge but **has also equipped us with essential insights into the medical indications that fit treatment at your facility.** Your commitment to excellence in patient care and research is truly commendable. Additionally, it was of great importance to us to have the opportunity to visit Mr. Y.L and Mrs. B.K, during their challenging treatments. Witnessing the path and care they are receiving was impressive. Moreover, witnessing the futuristic carbon ion technology in action was nothing short of impressive. The innovative approaches and cutting-edge technology employed at MedAustron underscore the facility's commitment to pushing the boundaries of medical science and patient care. [...].

Prof. Salem Billan, Dr Roy Holland, Israel

”[...] We strongly believe particle therapy is the future for the Baltic States. [...] The knowledge the experts at CNAO have shared with us allows us to have a better understanding of the intricacies of cancer treatment with protons and especially with carbon ions. We were familiarised with different clinical cases, treatment planning and delivery processes, as well as challenges and future directions for hadrontherapy. The knowledge we have received in CNAO will help us to manage our expectations and envision possibilities regarding the future particle therapy centre in Lithuania or other Baltic states. Therefore, our goal is to establish a close collaborative partnership with CNAO, with a focus on actively participating in patient treatment, clinical research, as well as education and training initiatives.”

Julija Joksaite (Lithuania, Medical Physicist).

Clinical TNA program Vademecum



HITRIplus Clinical Transnational Access Program: Vademecum

Who is eligible:

Physicians, particularly oncologists, radiotherapists and medical physicists, and technicians from countries that do not dispose of an hadron accelerator themselves wishing to access to your facility. Special focus on applicants from SEEIIST, Baltics or low incoming countries. Applications can be submitted anytime. Patient involvement is no longer a prerequisite for participation; these accesses focus on clinical research.

How to apply:

Individuals or group up to 3 researchers can submit their applications through the online portal: <https://www.hitriplus.eu/transnational-access-ca/>

How to organize the clinical TNA:

The visit may extend up to few days and should be focussed on comparison of treatment plans (photons, C-ions, protons), discussion for C-ion eligibility of clinical cases or for clinical research trials in Hadrontherapy, and active participation in the workflow of hadron treatment.

This is an example practiced at CNAO for a 3-days visit:

Day1 (afternoon) focused on introduction to the facility and its activities: Welcome and Brief introduction to the facility; Medical Physics activities and research; Clinical Activities and Trials; Radiobiology Research as support to clinical research in Hadrontherapy; Presentation of the R&D Department; The Accelerators, Non-clinical research activities at CNAO and visit to XPR; Final Discussion, Q&A Session

Day2 (all day) focused on case studies presented by Radiation Oncologists: and Radiologist: Case Study H&N; Neuro-oncology Case Study; Case Study Sarcomas; Case Study Gynecology; Final Discussion, Q&A Session

Day3 (morning) dedicated to practical sessions at the TPS with medical physicists: Case Study H&N; Neuro-oncology Case Study; Case Study Sarcomas; Case Study Gynecology; Final Discussion, Q&A Session

Remember to collect feedbacks (photos, interviews) for dissemination activities. Moreover, please be reminded that incoming researchers must provide you with a report (1-2 pages), detailing their learnings and experiences during the days spent at the hosting institution.

Cost associated to the Access and reporting:

The HITRIplus funds cover the travel and lodging expenses for the researchers plus the personnel cost involved in the access. A thorough record of all relevant documents pertaining to the expenses incurred for the travel and accommodation of the visiting research groups and all the timesheets of the internal personnel involved in the access must be collected. These timesheets serve as a critical element in determining the actual costs incurred during the access period by the hosting institution. Please, consider in these timesheets also administrative and clinical staff that work for the access not only during the days of the visit, but also in preparation of it. To enhance clarity in reporting, we recommend that the hosting infrastructure directly pay the expenses for travel and accommodation. Indeed, it is essential for invoices to reference the HITRIplus project GA 101008548

If you need assistance please refer to: Angelica Facoetti: Facoetti@cnao.it; Chiara Marazzi:

Marazzi@cnao.it



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101008548



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101008548



Deliverables

| WP No | Del Ref. No | Del No | Title | Description | Lead B | Nature | Dissemination |
|-------|-------------|--------|-------------------------------|----------------------------------------------------|--------|---------|---------------|
| WP1 | D1.1 | D1 | All governance boards instal | The General Assembly (GA), the Technical Proje... | CNAC | Report | Public |
| WP2 | D2.1 | D4 | Dissemination to the commu | Inform medical and research communities about t... | CNAC | Report | Public |
| WP1 | D1.3 | D3 | Data Management Plan | The data management plan describing the data ma... | CNAC | Report | Public |
| WP13 | D13.1 | D39 | H - Requirement No. 1 | The procedures and criteria that will be used t... | CNAC | Ethics | Confide |
| WP10 | D10.1 | D30 | Beam Characteristics Library | Generation of a beam Characteristics Library op... | | | |
| WP9 | D9.1 | D27 | Conceptual Design Report fc | From market and literature research, recommenda... | | | |
| WP8 | D8.1 | D24 | Magnet Assessment for SC a | Report on assessment of magnet types, suitable ... | | | |
| WP3 | D3.1 | D7 | Review of promising innovat | Review of promising innovative heavy ion therap... | MED4 | Report | Public |
| WP6 | D6.1 | D18 | HITRIplus delivers 100 hrs of | HITRIplus delivers 100 hrs of research TNA by m... | GSI | Report | Public |
| WP11 | D11.1 | D33 | Design study on novel treat | Design novel treatment control system, which wi... | CSL | Demonst | Public |
| WP10 | D10.2 | D31 | Data Distribution and Synch | Definition of the data distribution and synchro... | UKHC | Report | Confide |
| WP5 | D5.1 | D14 | Delivery of specialised train | Delivery of two one-week training courses on he... | SEELI | Website | Public |
| WP5 | D5.4 | D17 | Organisation of secondment | Organisation of secondments and internships in ... | UM | Website | Public |
| WP7 | D7.1 | D21 | Linac injector design | Advanced conceptual design of an optimised lina... | BEVA | Report | Confide |
| WP9 | D9.2 | D28 | Particle arc therapy delivery | Using the demonstrator from M9.1, a particle ar... | | | |
| WP4 | D4.1 | D11 | HITRIplus technologies and | Internal report collecting and describing the t... | | | |
| WP4 | D4.2 | D12 | Value propositions | Promotional text and visual material aimed at d... | | | |
| WP5 | D5.3 | D16 | Provision of e-learning cour | Conversion of the training courses and mastercl... | UM | Website | Public |
| WP10 | D10.3 | D32 | Real-Time Data Generation | Realization of a quasi-real time data supply mo... | UKHC | Report | Confide |
| WP8 | D8.2 | D25 | TDR (Technical Design Repor | Final report on Magnet design for SC synchrotr... | INFN | Report | Confide |
| WP3 | D3.2 | D8 | Web based heavy ion therap | Web based heavy ion therapy patient registry wi... | CNAC | Website | Confide |
| WP3 | D3.4 | D10 | Trial protocol for innovative | Definition of a pilot clinical trial protocol t... | MED4 | Report | Public |
| WP4 | D4.3 | D13 | Technology matching event | Organisation of an event targeted at industry, ... | INFN | Report | Public |
| WP7 | D7.2 | D22 | Gantry design | Report describing the main optics parameters an... | CNAC | Report | Confide |
| WP12 | D12.1 | D36 | Conceptual design report ar | Generation of standard operating procedure (SOP... | UMR | Report | Public |
| WP7 | D7.3 | D23 | SC synchrotron design | Design of an optimised synchrotron with SC magn... | SEELI | Report | Public |
| WP11 | D11.2 | D34 | Design study on novel accel | Design novel accelerator control system with st... | CSL | Report | Public |
| WP12 | D12.2 | D37 | Modelling of the joint result | Transfer of results from D12.1 to UKHD/HIT for ... | UKHC | Report | Public |
| WP2 | D2.2 | D5 | Dissemination and outreach | Outreach programme for events -1 per year. HITR... | | | |
| WP8 | D8.3 | D26 | Magnet Demonstrator | Completion of the magnet demonstrator with coil... | | | |
| WP9 | D9.3 | D29 | Identification of beneficial | Patient plans with dosimetric benefits will be ... | | | |
| WP2 | D2.3 | D6 | Provide an annual activity re | Activity report annually The delivery date assi... | SEELI | Report | Public |
| WP11 | D11.3 | D35 | Design study on novel patie | Design novel patient safety system, which will ... | CSL | Report | Public |
| WP12 | D12.3 | D38 | Final report and summary | Results will be summed up and distributed betwe... | UMR | Report | Public |
| WP5 | D5.2 | D15 | Delivery of masterclasses an | Delivery of a one week training course on heavy... | GSI | Website | Public |
| WP1 | D1.2 | D2 | Plenary meetings reports | Reports of the plenary meetings. The delivery d... | CNAC | Report | Public |
| WP3 | D3.3 | D9 | Dose constraints of OARs in | Dose constraints of OARs in use at European hea... | UKHC | Report | Public |
| WP6 | D6.2 | D19 | HITRIplus delivers 498 units | Description of TA units delivered by month 54 w... | GSI | Report | Public |
| WP6 | D6.3 | D20 | Publication of an overview | Publishing the results of the TA regarding expe... | GSI | Report | Public |

1° reporting period (11/11)

2° reporting period (3/9)

3° reporting period (0/20)



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101008548

Milestones



Milestones

| Number | Name | Lead Beneficiary | Delivery Date (Annex I) | Achieved | Comments |
|--------|-----------------------------------------------------------------------|------------------|-------------------------|-------------------------------------|----------------------------------------------------|
| 11 | Intermediate report on the state-of-the-art treatment room, acceler | CSL | 31 Mar 2022 | <input checked="" type="checkbox"/> | An internal report providing an overview of th... |
| 7 | Linac and Gantry conceptual design, and SC synchrotron main parame | CERN | 31 Mar 2022 | <input checked="" type="checkbox"/> | An internal report describing the basic paramet... |
| 5 | Specialised Courses and masterclasses content definition | SEEIIST | 30 Sep 2022 | <input checked="" type="checkbox"/> | The goal of WP5 is to increase the European Poo... |
| 14 | Evaluation of web based registry development status | MEDA | 30 Sep 2022 | <input checked="" type="checkbox"/> | A proposal for a web based registry to provide ... |
| 1 | Mid-term General Assembly Meeting completed | CNAO | 30 Sep 2022 | <input checked="" type="checkbox"/> | The HITRplus mid-term General Assembly meeting ... |
| 9 | Finished simulation environment for particle arc therapy | GSI | 30 Sep 2022 | <input checked="" type="checkbox"/> | The completion of the simulation setup for part... |
| 8 | Magnet Layout decision and Engineering design | INFN | 30 Nov 2022 | <input checked="" type="checkbox"/> | After the design comparison study (deliverable ... |
| 10 | Real-Time Data Generation Strategy | UKHD | 30 Nov 2024 | <input type="checkbox"/> | |
| 12 | Generation of a standardized dosimetry for collaborative radiobiologi | UMR | 31 Jan 2025 | <input type="checkbox"/> | |
| 3 | Evaluation of impact on European centres OARs constraints | MEDA | 31 Mar 2025 | <input type="checkbox"/> | |

THANK YOU!

STAY TUNED



<https://www.hitriplus.eu/>



@HITRIplus - Heavy Ion Therapy
Research Integration



HITRIplus



@heavy_ion



HITRIplus