HITRI plus
Heavy Ion Therapy Research Integration

Project Overview
WP1 & WP13

Sandro Rossi
Coordinator

Project Meeting – Marburg, May 22nd-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

New Project Officer

Due to internal re-shuffling (partly linked to our Project Office retirement likely next year), a new PO has been appointed for HITRI*plus*, **Anna Santoro.**

"…she is well familiar with particle accelerators and linked technology".

Andreas Holtel will still remain available to ensure smooth handover and/or additional assistance as needed.

Anna Santoro

Expert - Reviewer

Alejandro Mazal

HITRI*plus* Consortium (started April 2021)

23 Institutes

(4 CIRT centres, 11 research institutions, 5 universities, 3 SMEs)

14 European Countries

4.5 years Project

(1st April 2021 – 30th September 2025)

Total budget: 5 MEuro

New Entries

iba

NHa NORMANDY HADRONTHERAPY

Tera-Care

dkfz.

Grant Agreement number: 101008548 – HITRIplus

H2020-INFRAIA-2018-2020

HITRIplus Objectives

1. To integrate, **open** up and broaden **the leading European Research Infrastructure for the treatment of cancer with beams of ions**, ranging from helium to carbon and to heavier ions.

2. To **coordinate and strengthen the research programmes on heavy ion therapy** of different European institutions, by promoting synergies, collaborations, innovation, knowledge transfer, new initiatives and sharing of tools and data.

3. To **develop** in a joint and coordinated way **novel technologies** to improve the accelerators and their ancillary systems that provide particle beams to this scientific community. These technologies will improve the present generation of facilities and will be the foundation for a next generation European design for ion therapy facilities.

4. To **establish a European multidisciplinary community for heavy ion therapy** research, aiming at improving treatment strategies and modalities by connecting physics and engineering with medicine, biology and biophysics, and to extend this community towards emerging European regions, addressing in particular new initiatives in South East Europe.

5. To **define** the main technical features and the scientific programme of **a future pan-European Research Infrastructure** for medical and radiobiological research with heavy ion beams, to be built in South East Europe or in another European region.

WP1: Management
WP13: Ethics Requirement

WP2: Networking and Communication, Dissemination and Outreach

WP3: Clinical networking

WP4: Innovation, technology transfer, industry relation

WP5: Education and Training

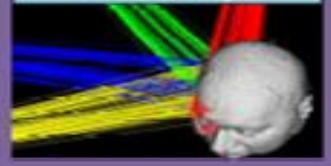
JRA
Joint Research Activities

TNA
WP6
Transnational Access

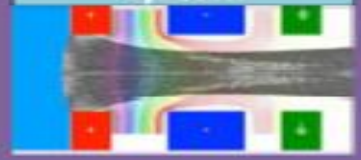
WP7: Advanced accelerator and gantry design

WP8: Superconducting magnets design

WP9: Advanced beam delivery

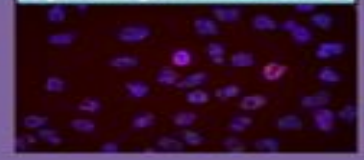


WP10: Multiple energy extraction system



WP11: Controls and safety

WP12: Radiobiology and quality assurance



HITRI*plus* Governance

General Assembly
1 representative per Party

Sanja Damjanovic, SEEIIST
Sanja.Damjanovic@cern.ch

External Scientific Advisory Board

Frederick Bordry

Katia Parodi

Jens Habermann

Felipe Calvo

Advisory Board for ethical/legal/ industrial issues

Giovanni Anelli

Chiara Delaini

Paolo De Carlo

The Pillars

Networking Activities NA

Manjit Dosanjh
Senior Advisor for Medical Applications at CERN and visiting professor at University of Oxford
Manjit.Dosanjh@cern.ch

Trans National Access TNA

Marco Durante
Director of the Biophysics Department of GSI and Professor of Physics at the Technical University of Darmstadt, Germany
M.Durante@gsi.de

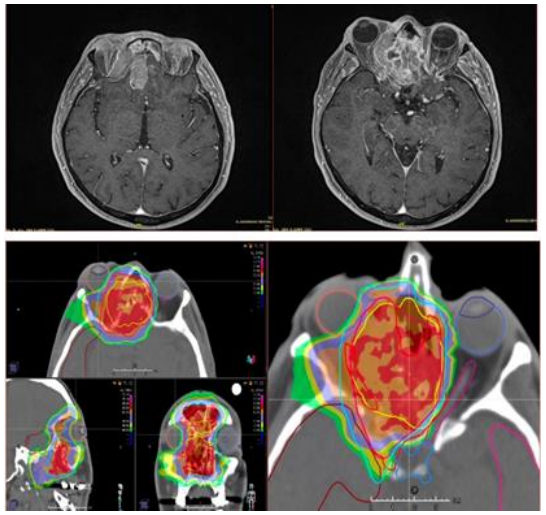
Joint Research Activities JRA

Maurizio Vretenar
Senior physicist and project manager at CERN
In HITRI*plus* is
Deputy Project Coordinator
Maurizio.Vretenar@cern.ch

NA: Networking Activities

WP2
Networking and Communication, Dissemination and Outreach

Peter Grübling, SEEIIST



WP3
Clinical Networking

Piero Fossati, MEDA

- ✓ Design **one trial** as a template for bringing innovative heavy ion therapy approaches in the clinics
- ✓ Set up a **European registry** to collect data on rare cancers treated with heavy ion therapy
- ✓ Review existing data on **OARs dose costraints** in use in the clinical facilities

NA: Networking Activities

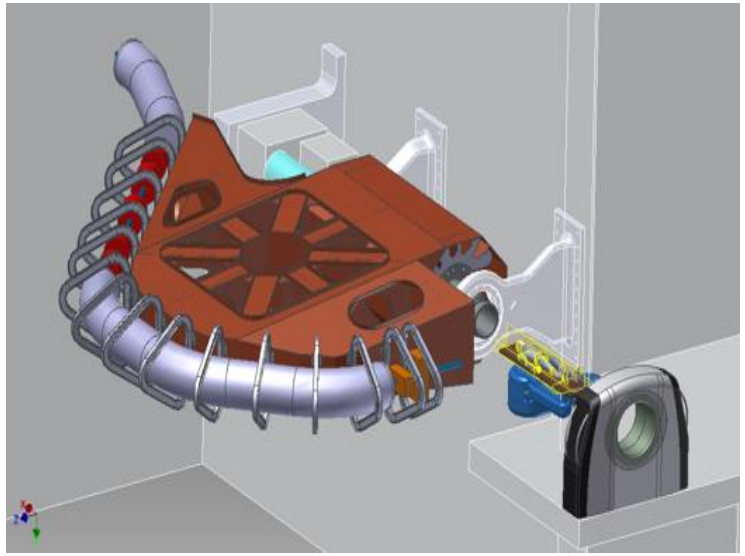
WP4
Innovation, technology transfer, industry relation

Manuela Cirilli, CERN

WP5
Education and training

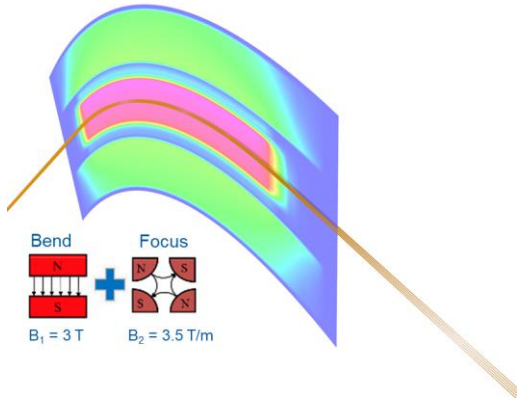
Nicholas Sammut, UM

JRA: Joint Research Activities



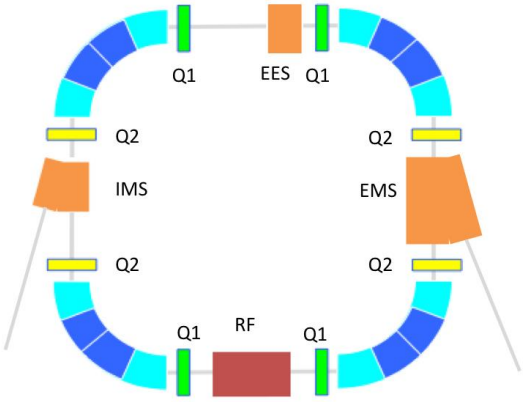
WP7
Advanced accelerator and gantry design

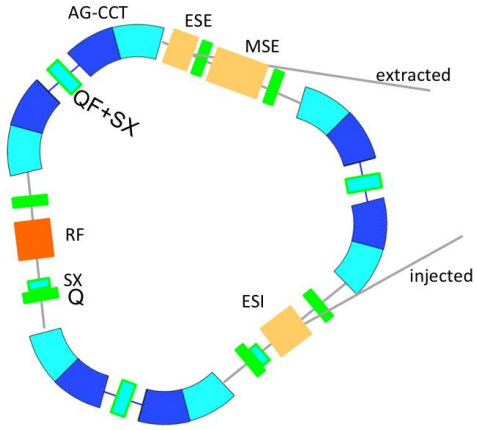
Maurizio Vretenar, CERN

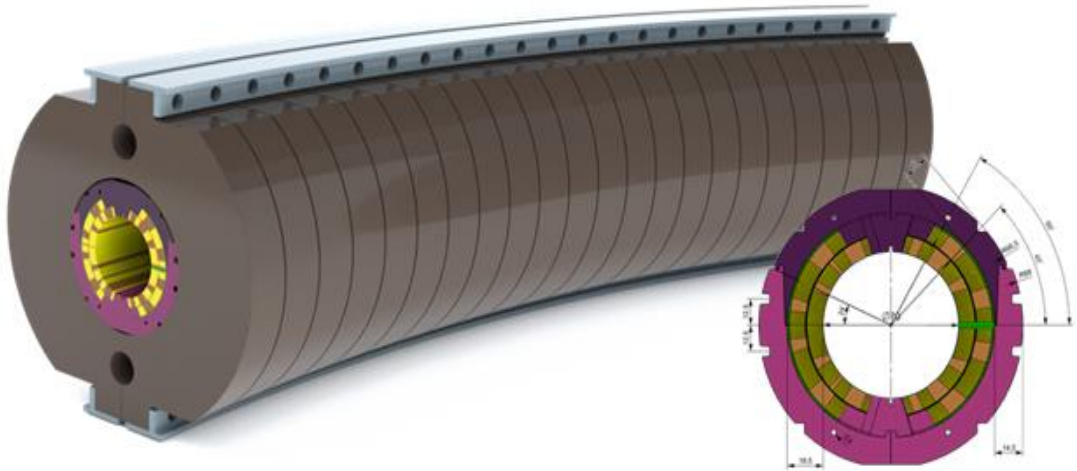


WP8
Superconducting magnet design

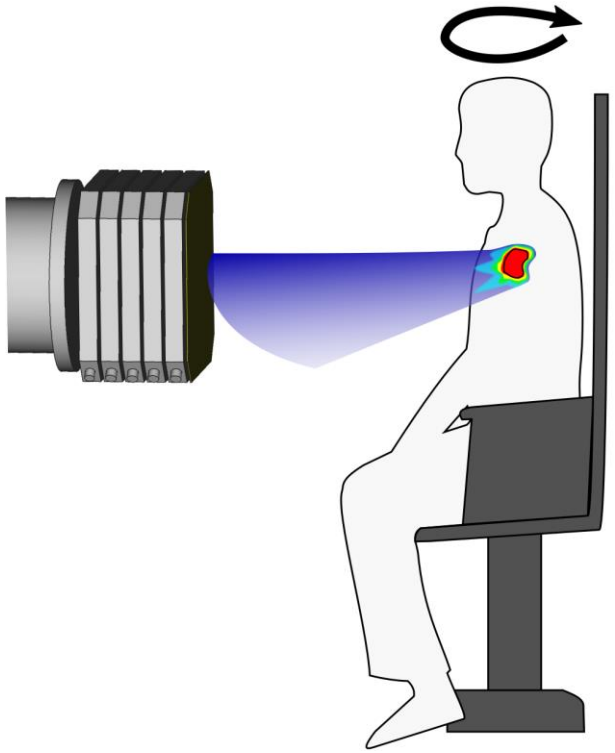
Ernesto De Matteis, INFN







JRA: Joint Research Activities

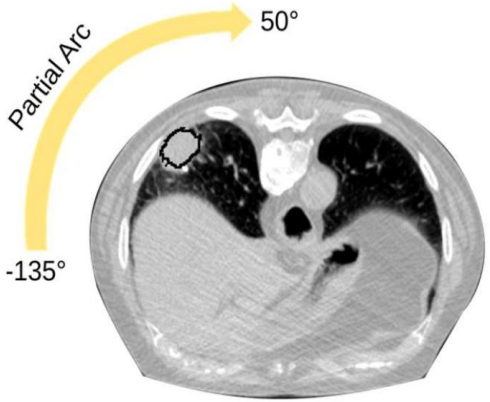


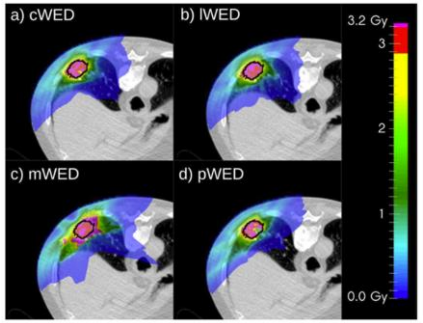
WP9
Advanced beam delivery

Christian Graeff, GSI

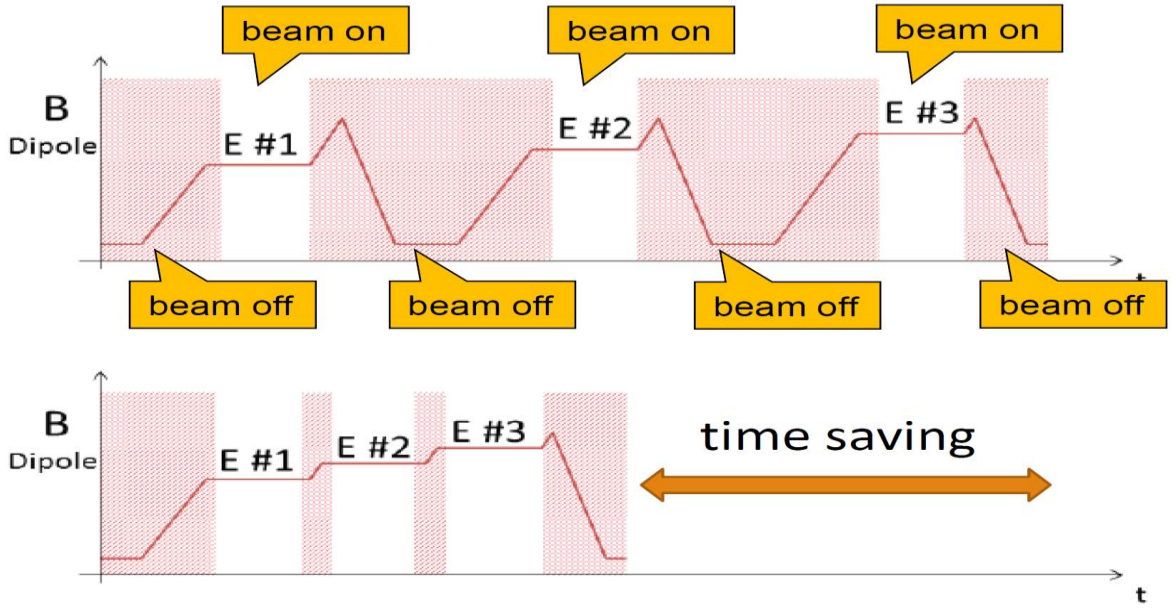
WP10
Multiple energy extraction system

Thomas Haberer, UKHD/HIT





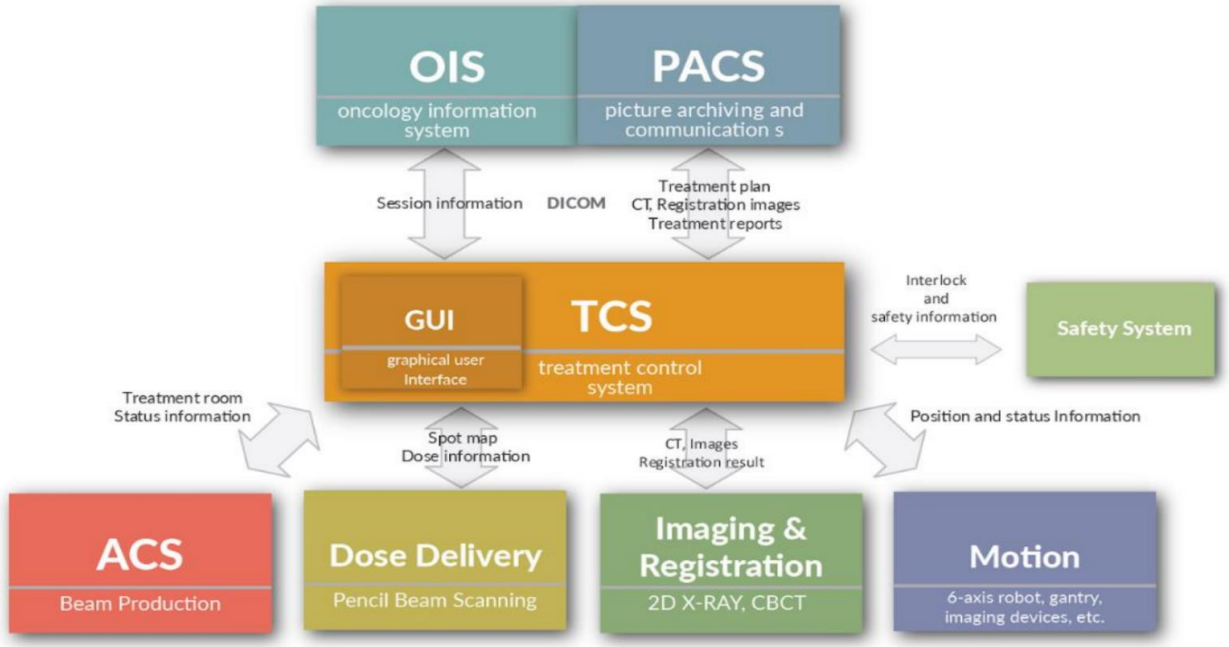
Arc - Therapy



JRA: Joint Research Activities

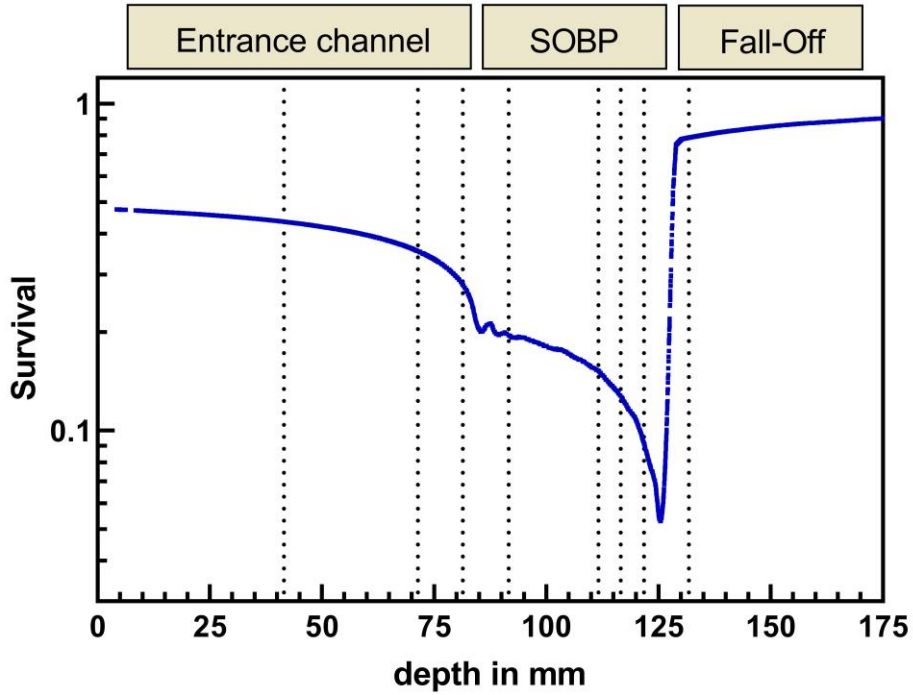
WP11
Controls and Safety

Dominik Perusko, CSL



WP12
Radiobiological Dosimetry and QA

Ulrike Schötz, UMR



TNA: Trans National Access

	Research [h]	Clinical [h]	Total
CNAO	80	12	92
GSI	296	-	296
UKHD/HIT	72	10	82
MEDA	-	12	12
MIT	-	16	16
	448	50	498

Clinical Research Access to clinicians/medical physicists/technicians

Free travel and accommodation for a 3 days full immersion in hadrontherapy clinics to discuss and examine real research clinical cases

Research Access to perform research activities with carbon ion beams

Free beam-time, travel and accommodation reimbursement

TNA: Trans National Access

WP1: Management (‘the Angels’)

‘Actual’ Deputy

Angelica Facoetti, CNAO
Angelica.Facoetti@cnao.it

Communication

Silvia Meneghello , CNAO
Silvia.Meneghello@cnao.it

Administration & Finance

Maria Vittoria Livraga , CNAO
mariavittoria.livraga@cnao.it

Organization

Chiara Marazzi , CNAO
Chiara.Marazzi@cnao.it

Coordination meetings so far …

Technical Project Board meeting:

1) April 9, 2021
2) June 30, 2021
3) July 29, 2021
4) September 29, 2021
5) October 27, 2021
6) November 25, 2021
7) January 18, 2022
8) February 10, 2022
9) March 22, 2022
10) April 27, 2022
11) June 23, 2022
12) July 28, 2022
13) October 25, 2022
14) November 22, 2022
15) January 26, 2023
16) February 28, 2023
17) April 4, 2024
18) May 23, 2023
19) June 26, 2023
20) September 13, 2023
21) November 3, 2023
22) January 26, 2024
23) March 8, 2024

WorkPackage Leaders Meeting:

- June 16, 2021
- December 12, 2022

GA meetings:

- (19 March 2021)
- June 21, 2021
- December 7, 2021
- May 18, 2022
- December 13, 2022
- June 28, 2023
- December 14, 20243

Project meetings:

- April 13, 2021 (Kick off meeting)
- December 7, 2021
- May 17-18, 2022 (CNAO, Pavia)
- June 26-28, 2023 (Riga, Latvia)
- May 22-23, 2024 (Marburg, Germany)

ESAB meeting:

- April 28, 2022
- December 12, 2022
- June 26, 2023
- May 22, 2024

ABELII Meetings:

- November 16, 2021
- May 18, 2022
- December 12, 2022
- April 28, 2023

Deliverables

☑ 8/8 Deliverables completed
(18/18 Deliverables completed)

Deliverables, Ethics, DMP, Other Reports

For the full management of the deliverable submission use the 'Continuous Reporting' page

Show Filters Clear Filters

WP No	Del Rel	Del No	Title	Lead Benef	Nature	Est. Del. Date (annex I)	Status
WP10	D10.2	D31	Data Distribution and Synchrotron Timing Requirements	UKHD	Repor	31 Jan 2023	Submitte
WP5	D5.1	D14	Delivery of specialised training courses	SEEIIST	Websi	30 Sep 2023	Submitte
WP5	D5.4	D17	Organisation of secondments and internships: calendar of events	UM	Websi	30 Sep 2023	Submitte
WP7	D7.1	D21	Linac injector design	BEVA	Repor	30 Sep 2023	Submitte
WP9	D9.2	D28	Particle arc therapy delivery to a small scale demonstrator of a rotational patient positioning system for gantry-free delivery with	GSI	Demo	30 Sep 2023	Submitte
WP4	D4.1	D11	HITRIplus technologies and dissemination plan	CERN	Repor	31 Jan 2024	Submitte
WP4	D4.2	D12	Value propositions	GSI	Repor	31 Jan 2024	Submitte
WP5	D5.3	D16	Provision of e-learning courses	UM	Websi	31 Mar 2024	Submitte

Milestones

☑ 1/1 Milestones completed
(11/11 Milestones completed)

Milestones

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

Publications during 2nd reporting period

19 articles, 9 conference proceedings, 9 posters

Scientific Articles 2 RP

- M G Pullia, E Benedetto, L Dassa, E De Matteis, M Donetti, E Felcini, G Frisella, M Karppinen, C Kurfürst, S Mariotto. "Explorative studies of an innovative superconducting gantry". J. Phys.: Conf. Ser. 2420 012099, 2023. DO https://iopscience.iop.org/article/10.1088/1742-6596/24
- A. Mamaras, D. Sampsonidis, L. Bellan, G. Biso Vretenar. J. Phys.: Conf. Ser. 2687 052010, 2024. DOI 10.1 https://iopscience.iop.org/article/10.1088/1742-6596/26
- F Toral, F. D Barna, C Calzolaio, A Carloni, G Ceru Mariotto, J Munilla, D Perini, M Prioli, L Rossi, M Statera Nb-Ti CCT Magnet EU Programs for Hadron Thera Superconductivity, vol. 34, no. 5, pp. 1-5, A 10.1109/TASC.2023.3349252. (https://ieeexplore.ieee.or
- L. Rossi, D. Barna, A. G. Carloni, E. De Matteis, Karppinen, G. Kirby, T. Lecrevisse, R. Musenich, D. Per Tommasini." Magnet Technology and Design of Supercon Hadron Therapy" J. Phys.: Conf. Ser. 2687 092009, 2024. I https://iopscience.iop.org/article/10.1088/1742-6596/26
- E. Benedetto, M. Vretenar, Innovations in the r therapy with ion beams, 2024 J. Phys.: Conf. Se 6596/2687/9/092003. https://iopscience.iop.org/article/
- E. De Matteis *et al.*, "Straight and Curved Canted (Ion Therapy: Comparison Between Various Design C Operation," in *IEEE Transactions on Applied Superconduc* Art no. 4401205, doi: 10.1109/TASC.2023.3259330
- L. Rossi, et al. "Magnet Technology and Design of Gantry for Hadron Therapy." Journal of Physics. Confer 92009-, https://doi.org/10.1088/1742-6596/2687/9/092(
- L. Nikitovic, T. Torims and M. Vretenar "Comparison of 352 MHz linac structures for injection into an ion therapy accelerator". J. Phys.: Conf. Ser. 2687 052011, 2024. DOI 10.1088/1742-6596/2687/5/052011 https://iopscience.iop.org/article/10.1088/1742-6596/2687/5/05
- M. Prioli, E. Bianchi, A.G. Carloni, R. Cereseto, E. De Matte Mariotto, R. Musenich, A. Palmisano, L. Rossi, M. Sorbi, S. Sorti, M M. Pullia, A. Bonasia, T. Boutboul, G. Ceruti, J. Fleiter, J. M. Karp Superconducting Ion Gantry (SIG) Dipole Demonstrator Magnet, Superconductivity, vol. 34, no. 5, pp. 1-5, Aug. 20 10.1109/TASC.2024.3361440. https://ieeexplore.ieee.org/abstract/document/10418987
- Georgieva, P., Dosanjh, M. ENLIGHT (European Network f its role in Hadron therapy. Health Technol. (2024). https://doi.org
- A. Facoetti and S. Rossi. "The Heavy Ions Therapy Res Health Technol., March 2024. https://doi.org/10.1007/s12553-024-00841-y
- B. Vischioni, M. Bonora, S. Ronchi, et al. "Head and neck c results of hadrontherapy of a dual beam facility". Health Technol. https://doi.org/10.1007/s12553-024-00843-w
- P Georgieva and M. Dosanjh. "ENLIGHT (European Netwo and its role in Hadron therapy". Health Technol., 2024. https://doi.org/10.1007/s12553-024-00837-8
- Molinelli, S., Mirandola, A., Magro, G. et al. Treatment Planning: comparing techniques and standards. Health Technol. (2024). https://doi.org/10.1007/s12553-024-00845-8
- S. Sorti *et al.*, "Electromagnetic Losses in Fast-Ramped Canted-Cosine-Theta Magnets," in *IEEE Transactions on Applied Superconductivity*, vol. 34, no. 3, pp. 1-6, May 2024, Art no. 4003506, doi: 10.1109/TASC.2024.3360933.
- De Matteis, E. New technologies: superconducting magnets. *Health Technol.* (2024). https://doi.org/10.1007/s12553-024-00849-4
- Volz, L.; Reidel, C.-A.; Durante, M.; Prezado, Y.; Schuy, C.; Weber, U.; Graeff, C. Investigating Slit-Collimator-Produced Carbon Ion Minibeams with High-Resolution CMOS Sensors. *Instruments* 2023, *7*, 18. https://doi.org/10.3390/instruments7020018
- Volz L, Graeff C, Durante M, Collins-Fekete CA. Focus stacking single-event particle radiography for high spatial resolution images and 3D feature localization. Phys Med Biol. 2024 Jan 10;69(2):024001. doi: 10.1088/1361-6560/ad131a. PMID: 38056016; PMCID: PMC10777170.
- E Benedetto, D Barna, M D'Addazio, R De Maria, E Felcini, G Frisella, L Garolfi, A Latina, H Norman, E Oponowicz. "Strongly curved super-conducting magnets: beam optics modeling and field quality". J. Phys.: Conf. Ser. 2687 062007, 2024. DOI 10.1088/1742-6596/2687/6/062007 https://iopscience.iop.org/article/10.1088/1742-6596/2687/6/062007/meta
- S. Sorti , G. Ceruti, E. De Matteis, S. Mariotto, M. Prioli, L. Rossi, M. Sorbi, R.U. Valente. "Electromagnetic Losses in Fast-Ramped Canted-Cosine-Theta Magnets". IEEE Transactions on Applied Superconductivity, vol. 34, no. 3, pp. 1-6, May 2024, Art no. 4003506, DOI: 10.1109/TASC.2024.3360933. https://ieeexplore.ieee.org/abstract/document/10418266

Summary of scientific contributions

Invited scientific talks

- S. Rossi, CNAO experience and international pe
  Developing Human Resources for Setting Up ar
  Headquarters – Vienna
- S. Rossi, Ion Therapy Ce
  Sofia, 12-13th May 202
- S. Rossi, HITRIplus – He
  Conference, Madrid, 10
- S. Rossi, Practical exper
  Research: consideratio
- S. Rossi, HITRIplus, Onli
- S. Rossi, Introduction t
  CERN, Geneva, Octobe
- S. Rossi, IS CNAO THE R
  Development of a hadr
  BNCT. Workshop CNAC
- A.Facoetti, HITRIplus –
  status and perspective
  existing. Scientific day
- S. Rossi, Health ecosyst
  knowledge exchange &
- S. Rossi, Hadrontherap
  Annual Meeting of Arg
  Aires, Georgetown. No

- Fossati P. Co
  Symposium-
- Fossati P. Ca
  Therapy Sym
- Fossati P. Ca
  Particle Ther
- Ankita Nacha
  Joanna Gora,
  strategy in ca
  2023, Vienna
- Ankita Nacha
  Gora, Gernot
  ion radiother
  2023, Madrid
- Marco Duran
- M. Vretenar,
  HITRIplus ser
- M. Vretenar,
  11-13.10.23
- E. Benedetto
  HEP Projects
- R.Taylor, Slo
- H.Huttunen,

Scientific Talks
(50 speeches)

Public talks
(13 events)

Webinars
(9 events)

Lectures
(18 events)

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e-to-mass Ratio of 1/2 with a
erence (CBC 2022),
an Ion Therapy Accelerator

gy layer optimization for carbon ion arc therapy"
TCOG) annual meeting, PTCOG60, 1st of July 2022,
ble yet
c therapy" ESTRO Physics workshop 2022: Particle
ality , 7th of October 2022, Lisbon, Portugal;

lins-Fekete „Focus stacking particle radiography"
ER, 2022.
, M. Durante, U. Weber, C. Graeff "Characterizing
ams with CMOS sensors " PTCOG 2023 annual

Durante, A. Mairani, X. Ding, C . Graeff, T. Li
tic Radiosurgery of Multiple Brain Metastases"
ouncil symposium recognition, full oral presentation
M. Durante, C. Graeff, C.-A. Collins-Fekete
time image guidance" 4th Ion Imaging workshop

erence 2023, Darmstadt, GER

Agenda Wednesday 22nd

14:00 → 14:15	**Project Meeting Opening** **Relatori**: Klemens Zink, Sandro Rossi		15m
14:15 → 14:25	**Project Overview + WP1 and WP13** **Relatore**: Sandro Rossi		10m
14:25 → 14:35	**Administrative Management** **Relatore**: Angelica Facoetti		10m
14:35 → 14:50	**Financial Management** **Relatore**: Chiara Marazzi		15m
14:50 → 15:10	**Presentation Networking Activities pillar and WP2: Networking and Communication, Dissemination and Outreach** **Relatore**: Manjit Dosanjh		20m
15:10 → 15:25	**Coffee Break**		15m
15:25 → 15:40	**Presentation WP3 "Clinical networking"** **Relatore**: Piero Fossati		15m
15:40 → 15:55	**Presentation WP4 "Innovation, technology transfer, industry relation"** **Relatore**: Sandra Elisabeth Muhr		15m
15:55 → 16:05	**IBA and Normandy Hadrontherapy contribution** **Relatori**: Severine Rossomme, Virgile Letellier		10m
16:05 → 16:20	**Presentation WP5 "Education and Training"** **Relatore**: Nicholas Sammut		15m
16:20 → 16:30	**NA Pillar Discussion** **Relatore**: Manjit Dosanjh		10m
16:30 → 16:50	**Presentation WP6 "Transnational Access"** **Relatore**: Marco Durante		20m
16:50 → 17:00	**Discussion on WP6 "Transnational Access"** **Relatore**: Marco Durante		10m
17:00 → 17:30	**Hadrontherapy and EU clinical networks: status and perspectives** **Relatore**: Lisa Licitra		30m
17:30 → 17:40	**First Day Conclusion Remarks** **Relatore**: Sandro Rossi		10m
20:00 → 21:30	**Social Dinner**		10 30m

Agenda Thursday 23rd

09:00 → 09:10	**Opening** **Relatore**: Sandro Rossi		10m
09:10 → 09:30	**Presentation Joint Research Activities Pillar + WP7 "Advanced Accelerator and Gantry Design"** **Relatore**: Maurizio Vretenar		20m
09:30 → 09:45	**Presentation WP8 "Superconducting magnet design"** **Relatore**: Ernesto De Matteis		15m
09:45 → 10:00	**Presentation WP9 "Advanced beam delivery"** ¶ **Relatore**: Christian Graeff		15m
10:00 → 10:15	**Presentation WP10 "Multiple Energy Extraction System"** **Relatore**: Thomas Haberer		15m
10:15 → 10:30	**Coffee Break**		15m
10:30 → 10:45	**Presentation WP11 "Controls and Safety"** **Relatore**: Dominik Perusko		15m
10:45 → 11:00	**Presentation WP12 "Radiobiological Dosimetry and QA"** **Relatore**: Ulrike Schoetz		15m
11:00 → 11:20	**JRA Pillar Discussion** **Relatore**: Maurizio Vretenar		20m
11:20 → 11:50	**Project Officer Remarks** **Relatore**: Anna Santoro		30m
11:50 → 12:20	**Comments from the Reviewer** **Relatore**: Alejandro Mazal		30m
12:20 → 12:30	**Closing remarks** **Relatore**: Sandro Rossi		10m
12:30 → 13:30	**Lunch**		10
13:30 → 14:30	**2nd reporting period technical and financial report** **Relatore**: Coordinators, WP leaders		10
16:30 → 18:00	**Visit to MIT Facility**		10 30m

Agenda General Assembly

HITRI*plus* – 7th General Assembly meeting

Thursday 23 May 2024
VILA VITA ROSENPARK Congress Center, Marburg (Germany) and On line

14:30 → 14:40 Welcome, verification of the quorum and approval of the Agenda¶
Speaker: Sanja Damjanovic

14:40 → 15:10 Report of the Coordinator including the summary of the Review meeting¶
Speaker: Sandro Rossi

15:10 → 15:25 Second Technical Reporting
Speaker: Angelica Facoetti

15:25 → 15:40 Second Financial Reporting
Speaker: Chiara Marazzi

15:40 → 16:10 Open discussion on future evolutions of HITRIplus
Plenary

16:10 → 16:20 Date for the next meeting - AOB

THANK YOU!

https://www.hitriplus.eu/

@HITRIplus - Heavy Ion Therapy Research Integration

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Heavy Ion Therapy Research Integration

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

TNA Research

Applicant (PI)	Affiliation	Proposal title	Hours	Host	Period
Marie Vanstalle	Institut Pluridisciplinaire Hubert Curien (IPHC), Strasbourg	Measurements of damages to biomolecules in solution induced by carbon ions and their secondary fragments	30,5	CNAO	April 14/15 & May 26/27, 2023
Christophe Badie	UK Health Security Agency	Identifying specific gene signatures for different radiation qualities in human white blood cells and skin samples for biodosimetry purposes	8	CNAO	May 13, 2023
Ilaria Rinaldi	MAASTRO	Stopping power ratio measurements of electron density phantom	5	HIT	December 20, 2022
Fernando Dominguez	USC Spain	Silver atomic Quantum Clusters of five atoms (Ag5-AQCs), radiosensitizer for heavy-ion particle therapy.	6	GSI	February 11th & *April 18th*, 2024
Aleksandra Wronská	Jagiellonian University in Kraków	SiFi-CC – commissioning of a setup for prompt-gamma imaging	16	HIT	January 12/13, 16/17, 2023
Anne Klimpel	TU Dresden	Spectral Fibre Dosimetry for Heavy Ion Radiotherapy	6.5	CNAO	March 6, 2023
Charles-Antoine Collins-Fekete	University College London	Mixed beam image guidance for particle therapy applications	4	GSI	December 18/19, 2023
Sara Marcatili	CNRS/IN2P3, Grenoble, France	Test of TIARA detector with protons from synchrotron and carbon ions	(16)	CNAO	*Summer 2024*
Armin Durakovic	Cantonal hospital Zenica, Bosnia and Herzegovina	Angular distribution measurements of neutron fields generated with a typical clinical ion beams (proton and carbon) applied to anthropomorphic phantom	(16)	CNAO	*May 10/11, 2024*
Total 2nd RP			**76**		
1st RP			**91**		
Total 36 M			**167**		

TNA Clinical

Applicant	Affiliation	Country	Host	Number of visitors
Rogelio Robaina Escobar	AEPROT	Spain	CNAO	1*
Erika Korobeinikova	Hospital of Lithuanian University of Health Sciences	Lithuania	CNAO	3
Renata Zahu	Amethyst Radiotherapy	Romania	CNAO	2
Maria Topalidou	Papageorgiou General Hospital	Greece	CNAO	2
Ghizela Ana Maria Salagean	University of Babes Bolyai, Cluj Napoca	Romania	CNAO	2
Washington Oliveira	Federal University of Bahia – Brazilian Company of Hospital Services	Brasil	CNAO	1
Juliette Thariat	Centre Baclesse	France	CNAO	1
Zsolt Cselik	Veszprém County Hospital	Hungary	MEDA	1
Alexandra Kolenova	National Institute of Children's Diseases	Slovakia	MEDA	1*
Ana Perpar	Institute of Oncology Ljubljana	Slovenia	MEDA	2*
Katalin Hideghety	University Szeged, Department Oncotherapy	Hungary	MEDA	1*
Daniel Koffler	Mayo Clinic Florida	USA	MEDA	1
Roy Holland	Rambam Health Care Campus	Israel	MEDA	2
Remi Nout	Erasmus MC, University Medical Center Rotterdam	Netherlands	CNAO	3*
Linh Tran	Wollongong University	Australia	MEDA	1*

9 accesses completed in 2 RP
19 clinical researchers
10 countries

“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).