

International, multicentric *In Silico* clinical trial in lung, prostate and head&neck cancer, comparing photons, protons and C-ion therapy treatment: a multicentric planning study based on a reference dataset of patients: **Evaluation of feasibility**

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ROCOCO

Radiation

Oncology

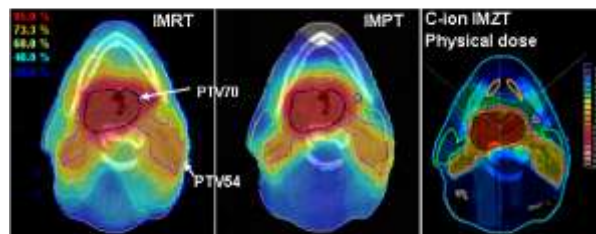
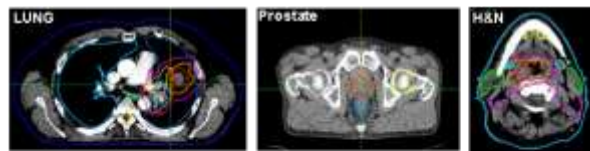
Collaborative

Comparison



4 phases using a ‘state of the art’ reference-dataset of patients

- Phase I: iso-effective tumor control
- Phase II: dose-escalation
- Phase III : hypo-fractionation
- Phase IV : Expanding of the project



3 Tumor Indications

Lung, prostate and H&N



X 3

Modalities

Photon, Proton, C-ion



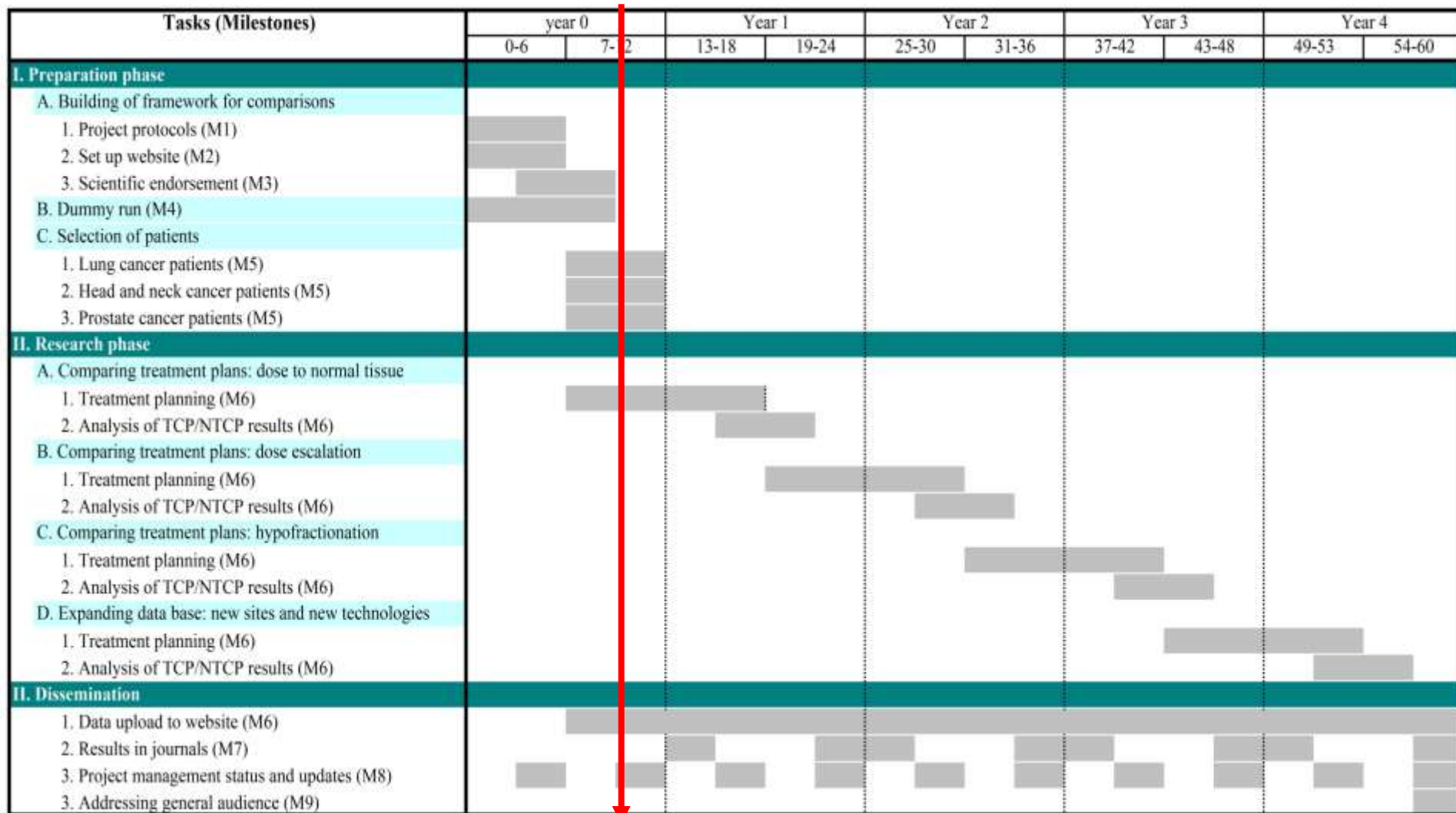
X 25

Patients

Asset of this methodology

- non-selected patients
- State of the art images (4D-CT, 4D-PET, ...)
- images of same patients will be used for comparison of different treatment modalities
- every patient's own control
- same delineation of volumes (CTV, GTV, (PTV), OAR)
- same radiation schedule
- pre-defined criteria

Time frame.. current status



Preparation phase project:

- consensus protocol
- accessibility data
- distribution of tasks
- data transfer (compatibility planning systems)
- dummy-run
- management (structure, communication, monitoring)
- ownership data
- author rights
- resources



corbis

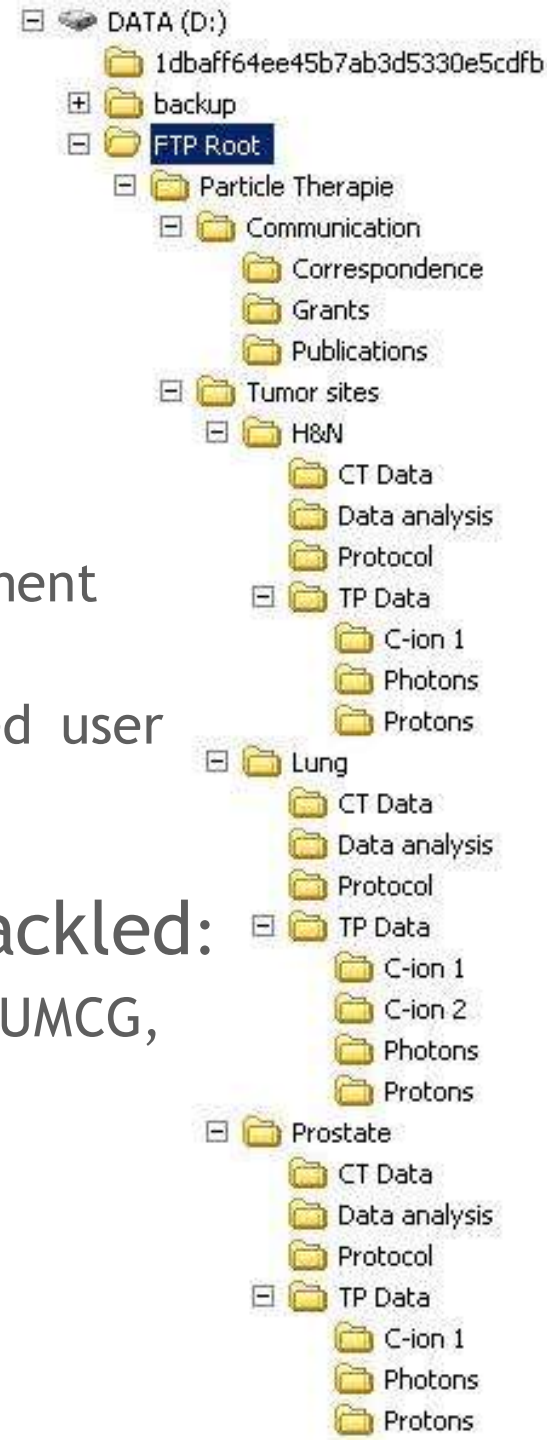


Accessibility data...

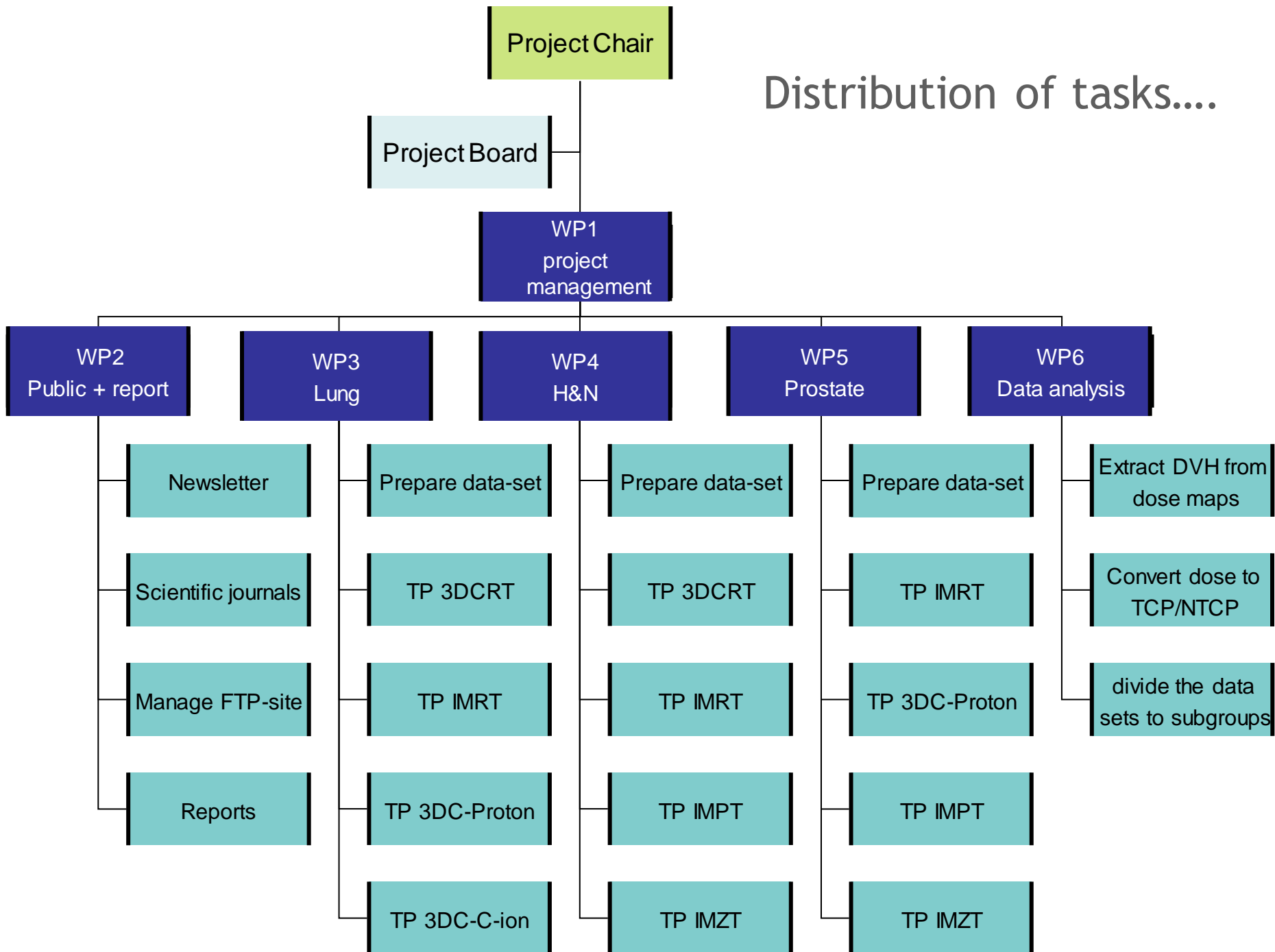
- Secured FTP-site
- Communication + dataset + treatment plans
- Each center has at least 1 specified user

problems that are being tackled:

- fire wall (secured networks: NKI, UMCG, NIRS)
- format compatibility



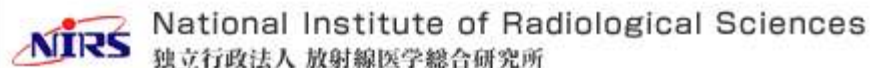
Distribution of tasks...



Management (structure, communication, monitoring).....

- 2 review meetings/year
- monthly phone/video conferences
- 2 electronic news letters/year
- Balance Score Card
- Ownership data/authorship:
MTA + protocol

10 participating centers worldwide... + expanding




MAASTRO acts as data host (<ftp.maastro.nl>) and coordinator



Resources....

- Non-funding project
- Several grant-applications are under consideration
- COST action in final stage

Result at end preparation phase ...

- ☑ consensus protocol
 - ☑ accessibility data
 - ☑ distribution of tasks
 - ☑ data transfer (compatibility planning systems)
 - ☑ dummy-run → Results lung: **poster 900**
 - ☑ management (structure, communication, monitoring)
 - ☑ ownership data
 - ☑ author rights
 - ☑ resources
- MTA
distributed
- 

Conclusion

- methodology project is feasible and has been endorsed by PTCOG (<http://ptcog.web.psi.ch/news.html>)
- more resources are needed
- database can be explored and used in future planning studies
- results will be linked with to an ongoing project on cost-effectiveness of PT:
Today, Room H1-H2 15.30 by
dr. J. Grutters: lung
Poster 987 by dr. A. Peeters: prostate

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