

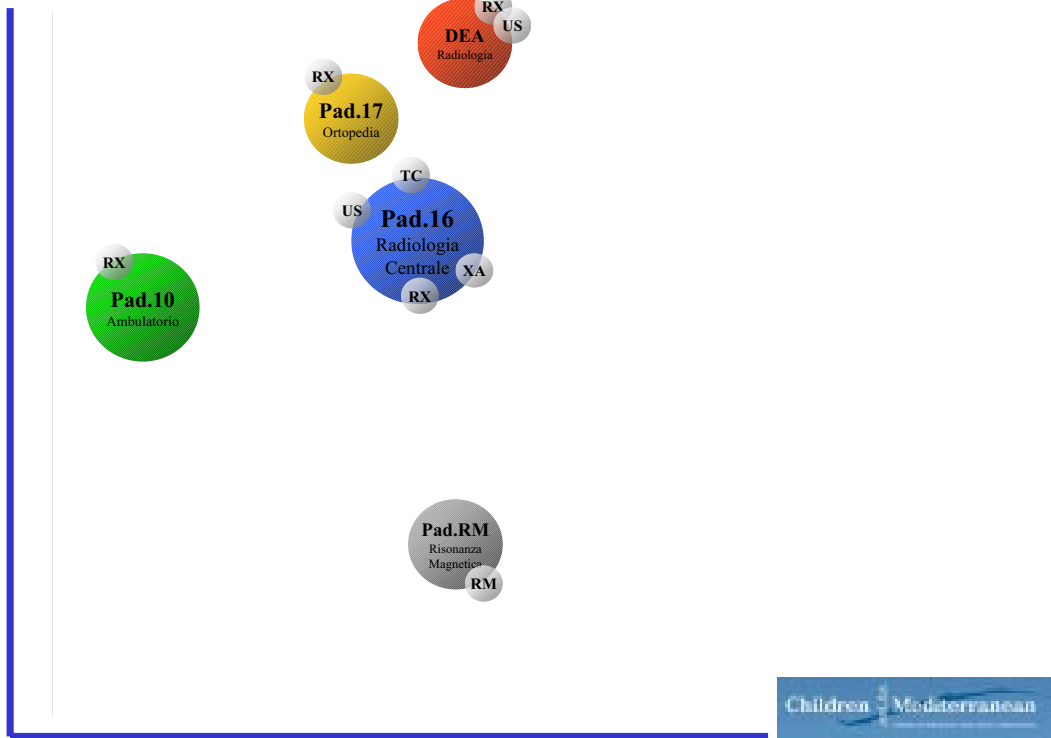
SOLUTIONS ? + PACS + TELERADIOLOGY + VIDEO CONFERENCING



Telemedicine 1

- To transfer images to and from an external department that belongs to the same main hospital or to send diagnostic or referral images and information instantly between hospitals, regardless of distance

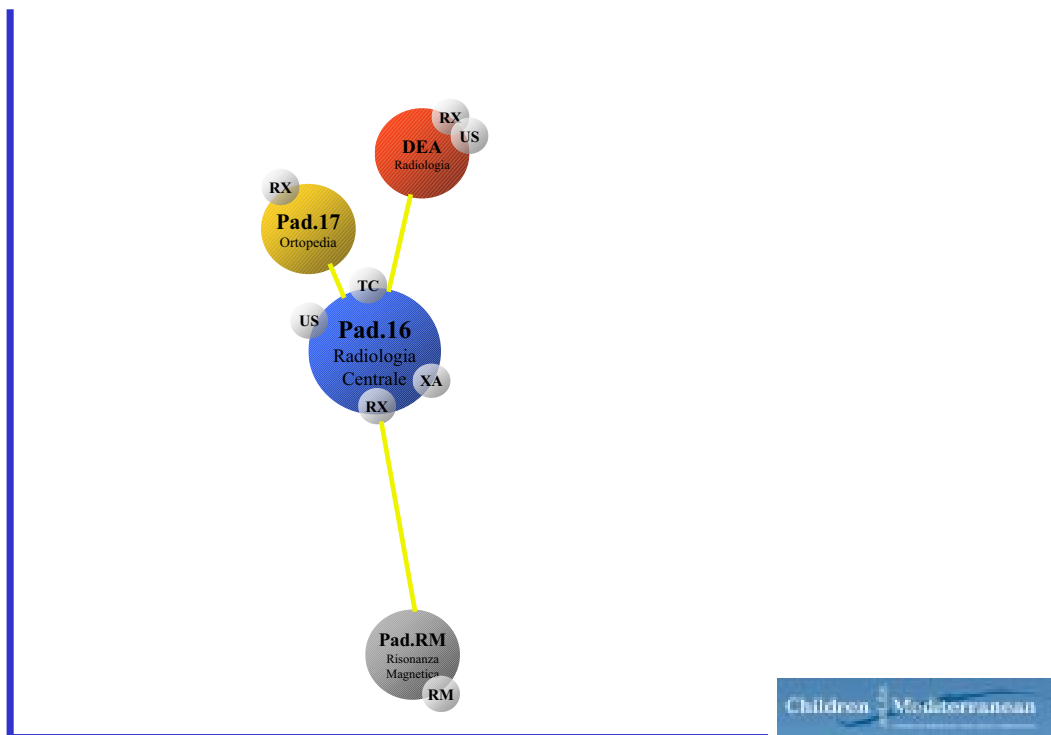
“Gaslini” Institute - GENOA



E8

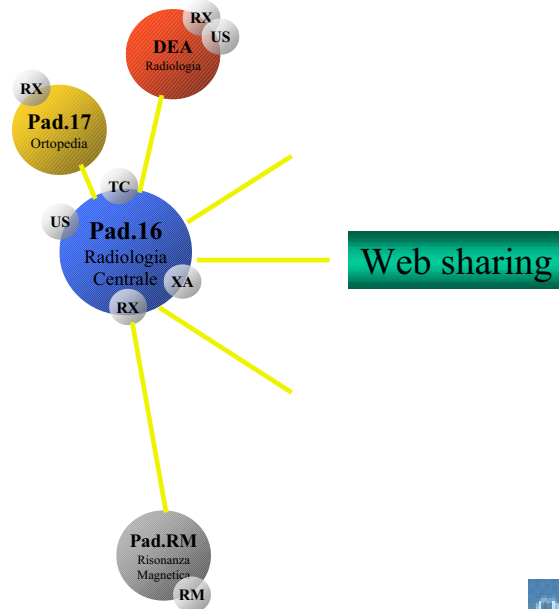
WORKSHOP VIII

“Gaslini” Institute - GENOA



“Gaslini” Institute - GENOA

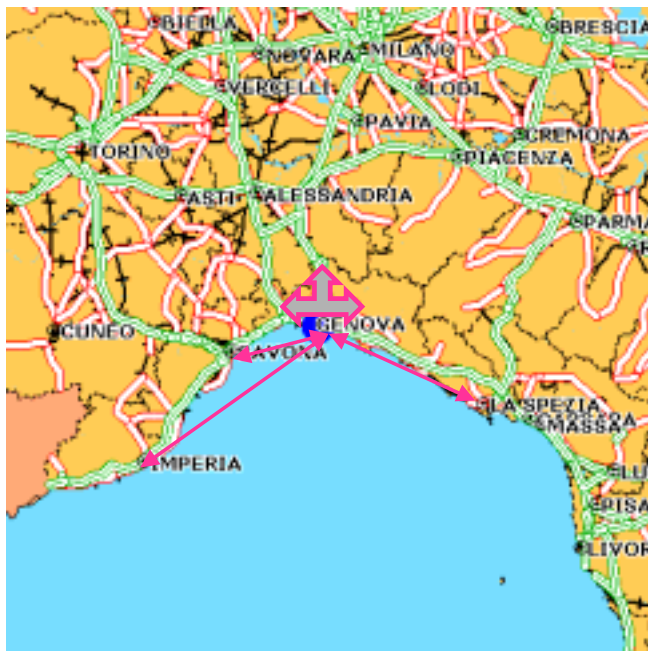
RIS-PACS Project



“Gaslini” Institute - GENOA



“Gaslini” Institute - GENOA



Children & Mediterranean

E8

WORKSHOP VIII

“Gaslini” Institute - GENOA



Children & Mediterranean

ADVANTAGES

- More bodies
- Decreased on-call
- Increased potential for research
- Increased facility for specialisation
- Increased quality of patient care
- Increased interface with paediatricians



DISADVANTAGES

- May need to move patient to doctor
- Depends on local health care reimbursement
- Depends on co-operation
- Possibly increases isolation of paediatric radiology



Telemedicine 2

- Clinical/Research Networks dedicated to specific diseases (not only imaging)



EC funded Project developing a Europe wide Clinical and Research Network for Neuroblastoma



Telemedicine 3

- E-Learning



UNC Radiology Teaching File

Pediatric Radiology Section

Select a case from the following list:

- [Primary tuberculosis](#)
- [Pyloric Stenosis](#)
- [Osteosarcoma](#)
- [Malrotation with volvulus](#)
- [Intussusception](#)
- [Congenital diaphragmatic hernia](#)
- [Foreign body aspiration](#)

Children Mediterranean




EUROPEAN ASSOCIATION
OF RADIOLOGY
E-LEARNING INITIATIVE



PEER-REVIEWED TEACHING CASES

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EDITOR IN CHIEF
P. A. L. Brier

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[Cardiac Imaging](#)
[Chest Imaging](#)
[Cervical Imaging](#)
[Gastrointestinal Imaging](#)
[Genital \(Female\) Imaging](#)
[Genital \(Male\) Imaging](#)
[Head & Neck Imaging](#)
[Musculoskeletal Imaging](#)

Pediatric Radiology

CARDIOVASCULAR

- ▶ Acute splenic sequestration
- ▶ Atrial septal defect
- ▶ Brown fat necrosis due to prostaglandin E1 in cyanotic congenital heart disease
- ▶ Disseminated neuroblastoma
- ▶ Ebstein's anomaly
- ▶ Hager's simplex type 1 encephalitis
- ▶ Renal agenesis
- ▶ Pharyngopericardium
- ▶ Renal medullary carcinoma
- ▶ Spleen trauma in a child
- ▶ Spandyllocoelal dysostosis
- ▶ Supracardiac total anomalous pulmonary venous drainage

Children Mediterranean

Telemedicine 4

•Our Project



Paediatric healthcare in Europe

- Centres of paediatric excellence dedicated entirely to paediatric diseases
- Large general hospitals with areas dedicated to paediatric diseases
 - Culture for paediatric sub-specialities usually not comparable to that which is attainable in a centre of paediatric excellence
- Medium to small size general hospitals
 - Without dedicated surgery, lab and diagnostic imaging centres



- Creation of a network of hospitals - to be expanded from the initial core group of centres of excellence (which will initially provide a consistent number of validated cases for the network) to a wider network that will also include General Hospitals (with some experience in paediatric imaging) and medium to small sized hospitals with more limited experience in paediatric imaging, who can be considered the end users of the system



- Continuous and automatic feeding of the database with cases included in the system for evaluation. Each of these cases, once validated after the final diagnosis, will serve as a further reference case for the system to improve its accuracy in lesion characterisation. The dissemination of the system will therefore automatically improve the validity of the system, increasing the number of cases contained in the database and the capacity to define the single specific diseases



•Goal



- Assist clinicians in improving the accuracy of their diagnosis
- Active learning during user interaction
 - Combined learning in both visual feature space (continuous) and clinical data space (discrete, or textual)
- Long-term relevance feedback tools can also facilitate advanced research activities toward the discovery of new disease patterns and trends



Conclusions

“CH need to be creative to do procedures safely as outpatients activities and provide both primary and tertiary care to children in remote facilities.

The days of paediatric sub speciality being practised exclusively within the four hallowed walls of the CH are over!”

Thomas L. Slovis

