

EU JUST CT 

Opportunities for future work on
justification, incl. impact of AI and
advanced clinical support tools

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Opportunities for future work on justification

Conflict of Interest

I do not have any conflict of interest to disclose



Opportunities for future work on justification

Background

- RCR referral guidelines introduced in 1989 – Making the best use of clinical radiology
- NB these are referral **NOT** justification guidelines
- Stand-alone guidelines (not specialty driven or integrated into requesting systems)
- Primarily intended for diagnosis – limited value for follow-up etc



Opportunities for future work on justification

Background

- Parallel development of healthcare pathways
- Tend to be specialty developed
- Stand-alone (not integrated into imaging department referral guidelines)
- Greater value for care pathways and multiple imaging

Opportunities for future work on justification

Future development of guidelines

- Integration of radiology and specialty imaging guidelines for patient pathway
- Comprehensive CDS and requesting systems become the standard of care
- Big data - populations
- Patient specific



Opportunities for future work on justification

How will AI enhance the appropriate justification of medical imaging with ionising radiation?

- AI powered decision support systems
- Clinical guidelines and knowledge bases
- Image quality assessment – feeds into justification
- Radiation dose estimation and optimisation
- Education and training – AI based tools and simulations



Opportunities for future work on justification

Future improvement of justification - obstacles

- Population data – gender, age, ethnic diversity
- Individual patient data – electronic patient record (EPR)
- Data security
- Public acceptance



Opportunities for future work on justification

Future improvement of justification - potential

- Improves imaging guidelines throughout the care pathway
- Improves consistency and flexibility for individual patients
- Improves relevance to individual patient care - personalised medicine
- Reduces inappropriate imaging ie imaging that does not contribute to appropriate patient care – frees up resources



Opportunities for future work on justification

Way forward and conclusions

- Public confidence needs to be improved
- Comprehensive EPRs are required
- Integrated EPR and imaging guidelines are required for complete care pathway
- AI driven systems are coming
- Mechanisms needed and resources in place for patient input and clinical specialist review

EU-JUST-CT Guidance Document



Thank you for your attention

