


XXXII CONGRESSO NAZIONALE AIRO
XXXIII CONGRESSO NAZIONALE AIRB
XII CONGRESSO NAZIONALE AIRO GIOVANI

AIRO2022

Radioterapia di precisione per un'oncologia innovativa e sostenibile

BOLOGNA, 25-27 NOVEMBRE
PALAZZO DEI CONGRESSI

 Associazione Italiana
Radioterapia e Oncologia clinica

 Società Italiana di Radiobiologia

 Associazione
Italiana
Radioterapia
e Oncologia
clinica




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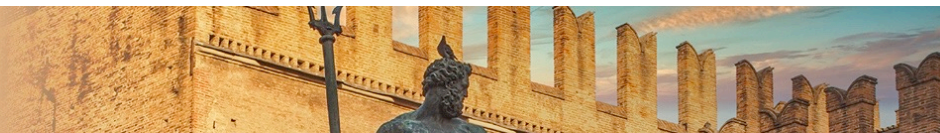
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Radioterapia di precisione per un'oncologia innovativa e sostenibile

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Radiomic-based stratification of high-risk prostate cancer patient for the prediction of biochemical free survival

Michele Maddalo

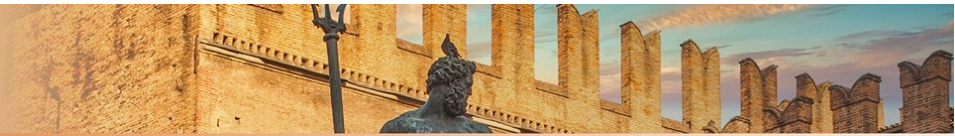


DICHIARAZIONE

Relatore: Michele Maddalo

Come da nuova regolamentazione della Commissione Nazionale per la Formazione Continua del Ministero della Salute, è richiesta la trasparenza delle fonti di finanziamento e dei rapporti con soggetti portatori di interessi commerciali in campo sanitario.

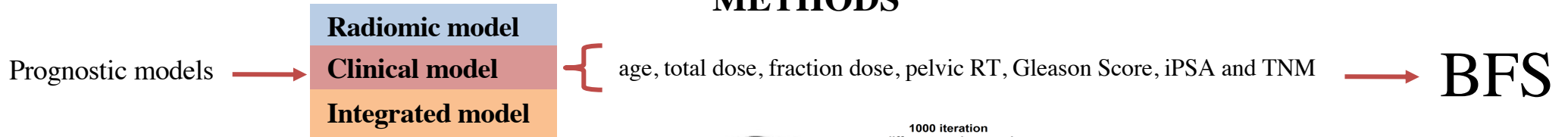
- Posizione di dipendente in aziende con interessi commerciali in campo sanitario: **NIENTE DA DICHIARARE**
- Consulenza ad aziende con interessi commerciali in campo sanitario: **NIENTE DA DICHIARARE**
- Fondi per la ricerca da aziende con interessi commerciali in campo sanitario: **NIENTE DA DICHIARARE**
- Partecipazione ad Advisory Board: **NIENTE DA DICHIARARE**
- Titolarità di brevetti in compartecipazione ad aziende con interessi commerciali in campo sanitario: **NIENTE DA DICHIARARE**
- Partecipazioni azionarie in aziende con interessi commerciali in campo sanitario: **NIENTE DA DICHIARARE**
- Altro



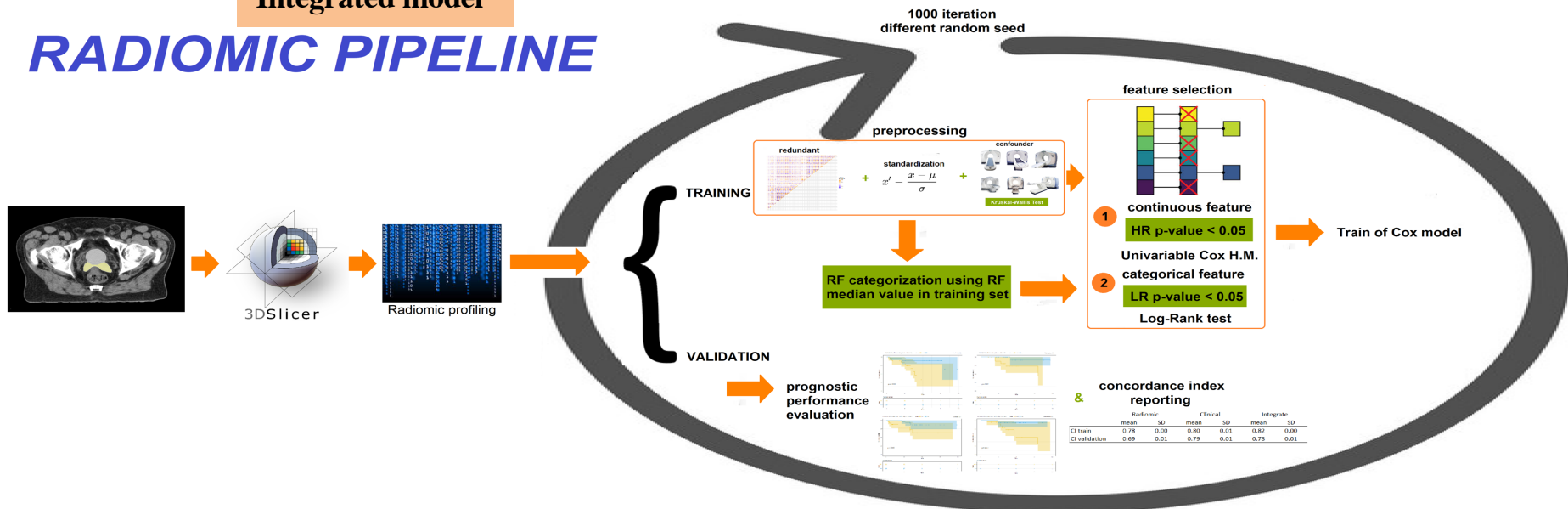
AIM OF THE STUDY

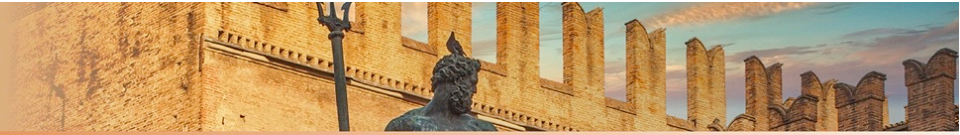
The aim of the study is to investigate the prognostic value of CT-based radiomic features (RFs) for the prediction of biochemical free survival (BFS) in high-risk prostate cancer patients treated with radical radiotherapy (RT).

METHODS

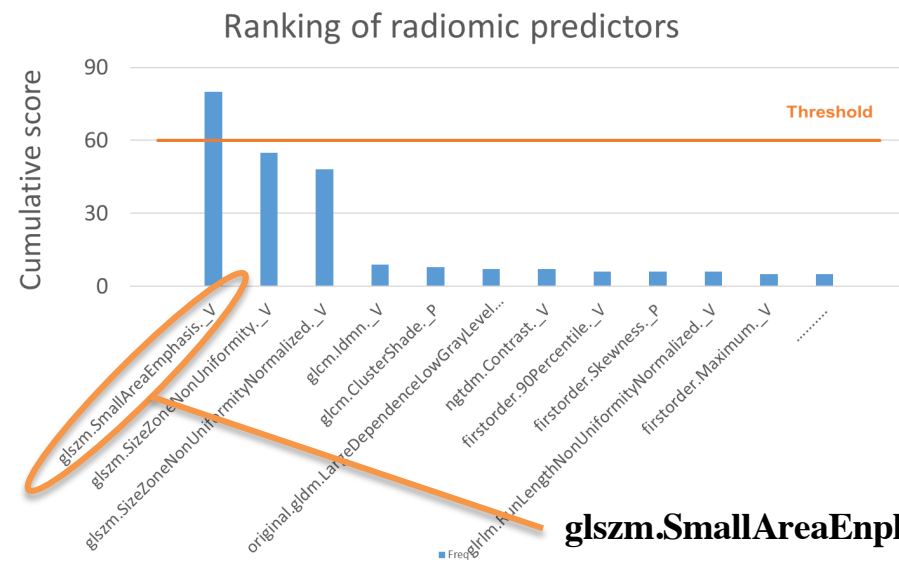
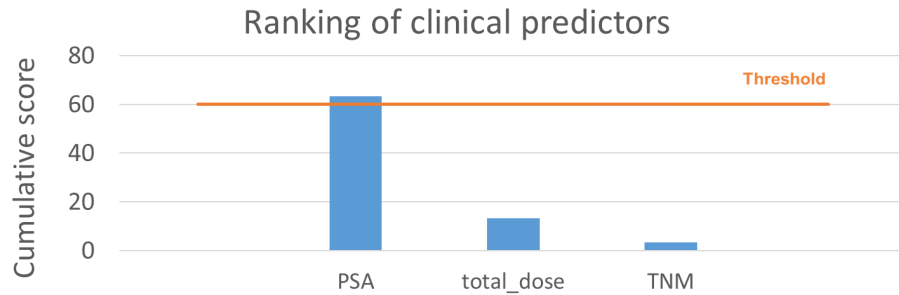


RADIOMIC PIPELINE

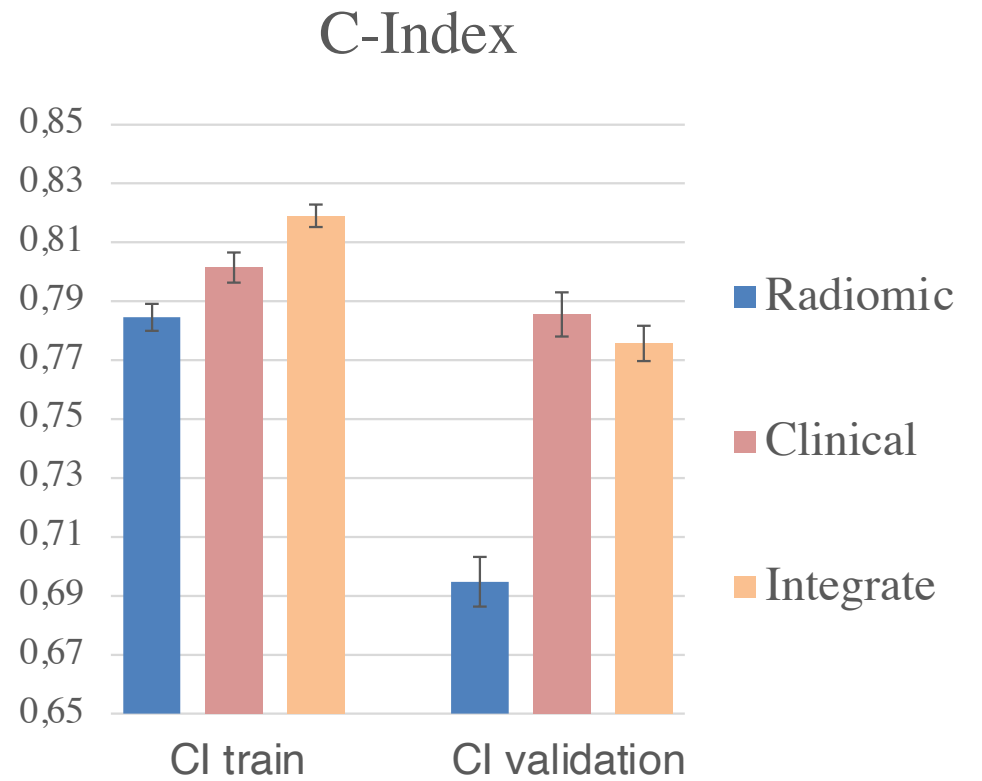


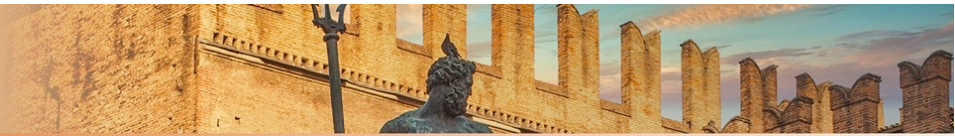


RESULTS



glszm.SmallAreaEmphasis (Vesicles)

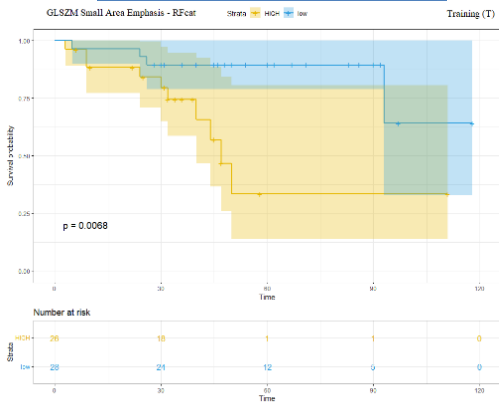




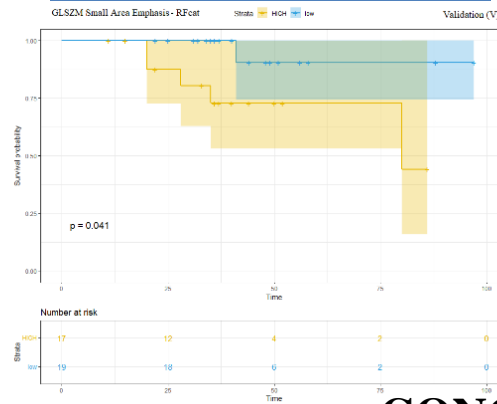
RESULTS

Median follow-up was 47 months (7–120) → at 47 months BFS was 75.8% for the whole population

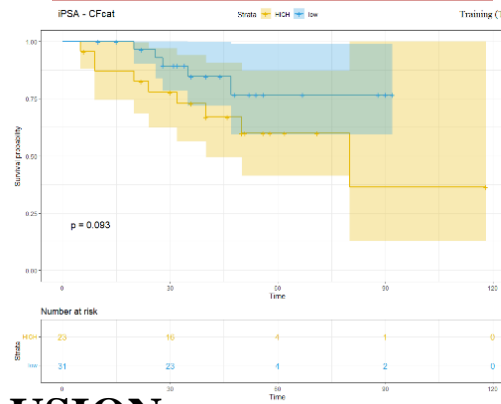
Radiomics: train



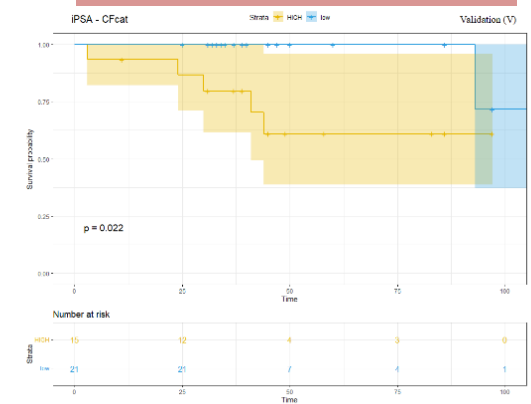
Radiomics: validation



PSA: train



PSA: validation



CONCLUSION

Using a robust pipeline we found that RFs have a significant prognostic value for the prediction of BFS in high-risk prostate cancer patients. However, radiomic model performance were less generalizable (lower validation C-index) and radiomic signature did not significantly improve the prognostic performance of a consolidated clinical predictor, i.e. PSA. Future developments will be focused on the implementation of an external validation.