Associazione Italiana Radioterapia e Oncologia clinica

Società Italiana di Radiobiologia

NUTRITIONAL AND INFLAMMATORY STATUS AS PREDICTIVE BIOMARKERS IN OLIGORECURRENT PCA

The RADIOSA TRIAL biology task

IEO Istituto Europeo di Oncologia

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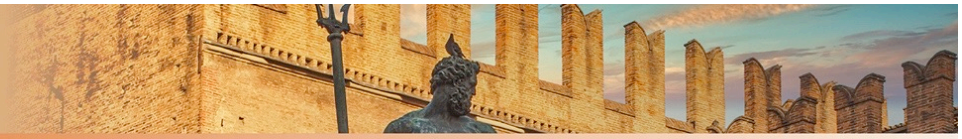
AIRC



DICHIARAZIONE

Relatore: MATTIA ZAFFARONI

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 **(NIENTE DA DICHIARARE)**
- Partecipazioni azionarie in aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**

Background & methods

STUDY PROTOCOL

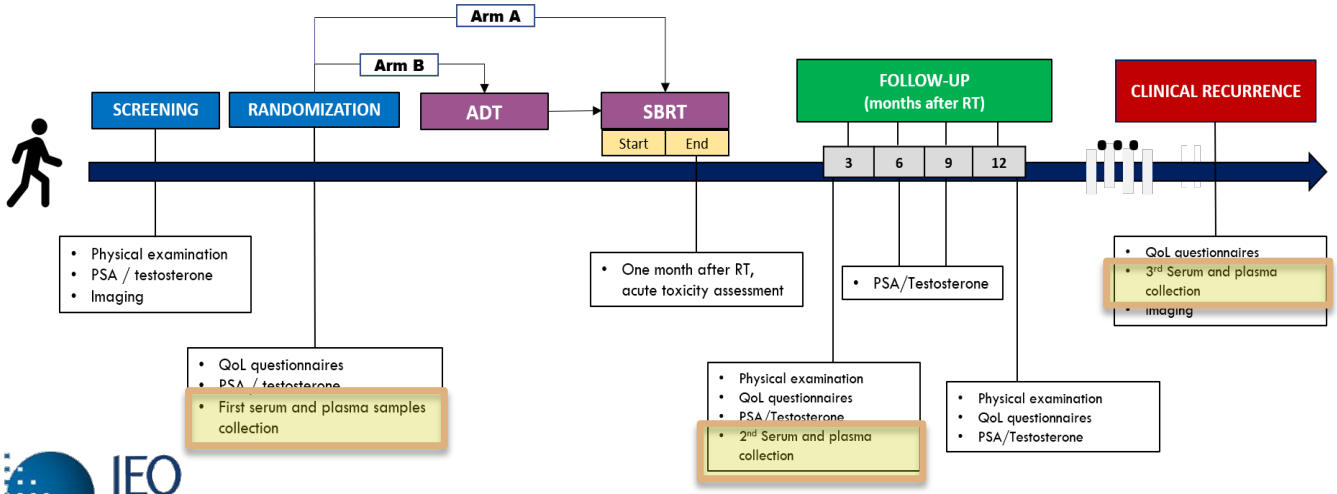
Radioablation +/– hormonotherapy for prostate cancer oligorecurrences (Radiosa trial): potential of imaging and biology (AIRC IG-22159)

Marvaso *et al. BMC Cancer* (2019) 19:903
https://doi.org/10.1186/s12885-019-6117-z

AIMS:

I. Compare **SBRT +/- ADT for oligorecurrent-castration-sensitive PCa** (OCS-PCa) in terms of efficacy, toxicity and Quality of Life (QoL).

II. **Develop biology/imaging based prognostic tool** to identify OCS-PCa subclasses.



STUDY DESIGN

Eligibility criteria
- Nodal or bone Pca clinical relapse
- 1-3 lesions
- Hormone-sensitive

1:1
RANDOMIZATION

ARM A
SBRT only on all lesions documented at imaging

n=160

ARM B
SBRT on all lesions + ADT for 6 months

Primary endpoint:
- Progression-free survival

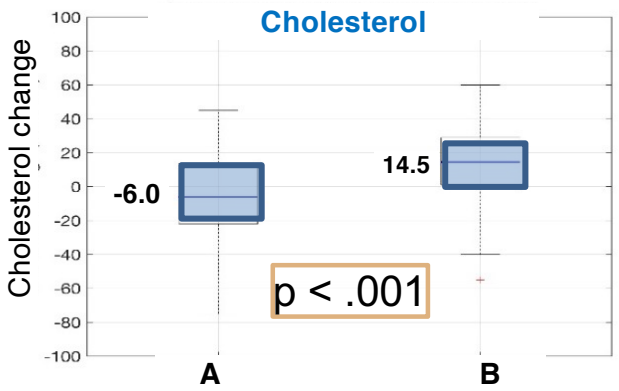
Secondary endpoints:
- Overall survival
- Biochemical progression-free survival
- ADT-free survival
- Local control
- Toxicity
- Time to castration-resistant disease
- Quality of life
- Identification of prognostic biomarkers
- Correlation between imaging-derived parameters and treatments outcome

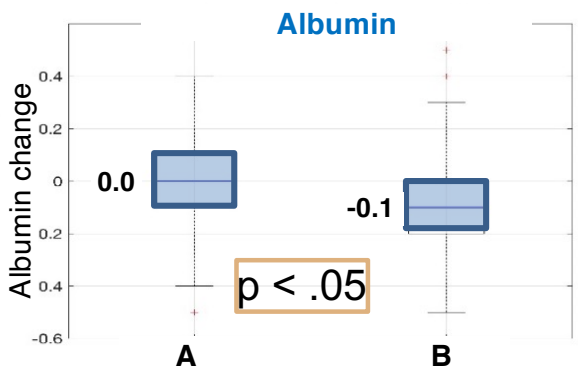
Results

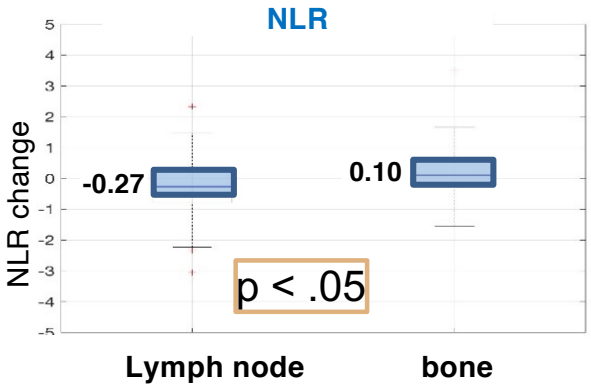
Enrollment ongoing

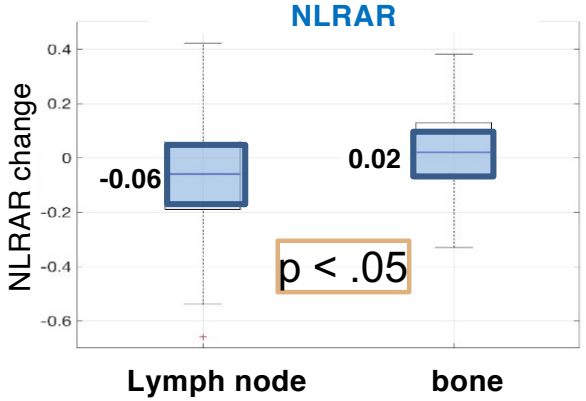
81 patients (41 arm A SBRT only, 40 arm B, SBRT+ADT) with a minimum **follow-up of 3 months**

- Patients stratified by **ADT administration** → cholesterol values showed an increasing trend in the group receiving, and the change in albumin level was also different between the 2 groups.
- patients stratified by **site of metastases** (52 lymph nodal, 29 bone localizations) → the values of NLR and NLRAR were found to be increased in patients with bone localizations ($p < .05$).









Conclusions

- The addition of ADT appears to have an impact on changes in **cholesterol and albumin**, two markers of a deteriorating QoL.
- Site of metastatic localization and **inflammatory status** appear associated. As bone localizations are linked to a lower response rate than lymph node-only sites, this outcome is consistent with the well-known fact that a higher inflammatory status results in a worse prognosis.
- Examined parameters seem to represent **intriguing candidates to be possibly used in clinical decision-making** to group patients according to whether they would benefit from more less aggressive therapies.
- The validation of these potential biomarkers requires further evaluations, correlations with clinical outcomes and extended follow-up data.

Long-Term Outcomes and Genetic Predictors of Response to Metastasis-Directed Therapy Versus Observation in Oligometastatic Prostate Cancer: Analysis of STOMP and ORIOLE Trials

Matthew P. Deek, MD[1,2]; Kim Van der Eecken, MD, PhD[3]; Philip Sutera, MD[2]; Rebecca A. Deek, MS[4]; Valérie Fonteyne, MD, PhD[5]; Adrianna A. Mendes, MD[6]; Karel Decaestecker, MD, PhD[7]; Ana Ponce Kiess, MD, PhD[2]; Nicolaas Lumen, MD, PhD[5]; Ryan Phillips, MD, PhD[8]; Aurélie De Bruycker, MD[7]; Mark Mishra, MD[6]; Zaker Rana, MD[6]; Jason Molitoris, MD, PhD[9]; Bieke Lambert, MD[10]; Louke Delrue, MD[11]; Hailun Wang, PhD[2]; Kathryn Lowe, BS[2]; Sofie Verbeke, MD, PhD[12]; Jo Van Dorpe, MD, PhD[12]; Renée Bultijnck, PhD[7]; Geert Villeirs, MD[10]; Kathia De Man, MD[13]; Filip Ameye, MD[14]; Daniel Y. Song, MD[2]; Theodore DeWeese, MD[2]; Channing J. Paller, MD[15]; Felix Y. Feng, MD[16]; Alexander Wyatt, PhD[17]; Kenneth J. Pienta, MD[15,18]; Maximillian Diehn, MD, PhD[19]; Soren M. Bentzen, PhD, DMsc[9,20]; Steven Joniau, MD, PhD[21]; Friedl Vanhaverbeke, MD[22]; Gert De Meerleer, MD[22]; Emmanuel S. Antonarakis, MD[6]; Tamara L. Lotan, MD[6]; Alejandro Berlin, MD[23]; Shankar Siva, MD, PhD[24]; Piet Ost, MD, PhD[22,25]; and Phuoc T. Tran, MD, PhD[2,6,15,18]

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NOW

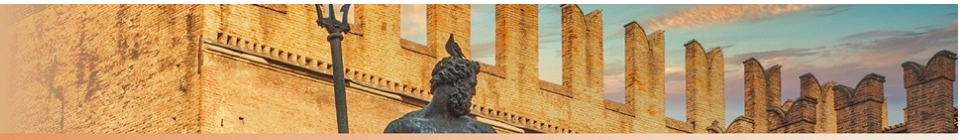
Search for high-risk mutations

Biological characterization of oligometastatic state ***crucial to avoid under- or over-treatment***

While the understanding of the genetic, signaling and immunologic biology is expanding, ***search for biomarkers should continue to be pursued*** in conjuction

RADIOSA TRIAL ongoing

Hope to ***contribute to the identification*** of reliable ***biological signatures*** and ***foster the correct patient stratification*** and ***complement the imaging information***.



THANK YOU FOR LISTENING

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