

EIBALL Subcommittee T-con 20180927

Thursday, September 27, 2018 8:43 AM

1. Welcome and approval of agenda
2. Approval of the minutes of the last meeting (May 4, 2018) - Approved
3. Update and discussion on biomarkers inventory (N. deSouza)
 - a. See screen capture
4. Position paper on imaging biomarkers (N. deSouza)
 - a. See screen captures (Biomarkers as Decision Support Tools) - manuscript to be focused on the issues highlighted in the gray boxes
 - b. Requested feedback in two weeks on draft to be distributed by EIBIR (Aidan Boyd-Thorpe)
5. Position paper on standardization and validation of biomarkers - A. Alberich-Bayarri
 - a. See screen capture
 - b. Requested input from committee as soon as possible, at least by the end of October
 - c. Submission target:
6. Imaging biomarker white paper (F. Gallagher)
 - a. See screen capture
 - b. Concern over too many parallel manuscripts. How to harmonize efforts?
 - c. Suggested submission to a special issue (based on our QIBA experience). There was enthusiasm for this suggestion.
 - d. *Insights Into Imaging* - official journal of the ESR - as a target.
7. QIBA profile on arterial spin labeling (X. Golay)
 - a. See screen capture
8. Imaging Biomarker Roadmap for Cancer Studies (F. Gallagher)
 - a. See item 6, above.
9. EIBALL and EIBIR
 - a. See screen capture
 - b. Seeking to maintain links between EIBALL and EIBIR
 - c. Appear to be some "complexities" in the interactions. (EIBIR cannot take an active role in COST projects unless subcontracted for services by the grant holder.)
10. Proposal for EIBALL workshop (for radiologists) (L. Fournier)
 - a. See screen capture

- b. Where and when to hold the event and how to fund it? Suggestion was to hold it at ECR 2020, or the day before the start of the ECR. Suggested duration: 1 day.
- 11. EIBALL Joint session at ECR2019: Imaging Biomarkers and their Combinations in an Era of Artificial Intelligence
 - a. See screen capture
- 12. EIBALL information on ESR website
 - a. See screen capture
 - b. Wanting to add more EIBALL information on the ESR website. Will be discussed offline.
- 13. Any other business - none offered
- 14. Next meeting - At ECR (F2F) or in May (tcon)
- 15. Adjournment



EIBALL SC
TCon_age...

Screen Capture File:



ScreenCaptu
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Biomarkers inventory – N. deSouza

So far

Oncological: Prostate from Lancet Oncology manuscript (Lecouvet et al)

Non Oncological: Renal from NDT manuscript (Caroli et al)

Breast: Needs validation by EUSOBI

Gynae: Needs validation by ESGUR

Lung: Needs expansion (Claus Peter Heussel)

Sarcoma: ?? Pancreas??

Should we focus on specific tumour types as a goal? Which ones?

Where should we upload the completed inventories?

How should we advertise the availability of this information? Web links?

Position paper on imaging biomarkers

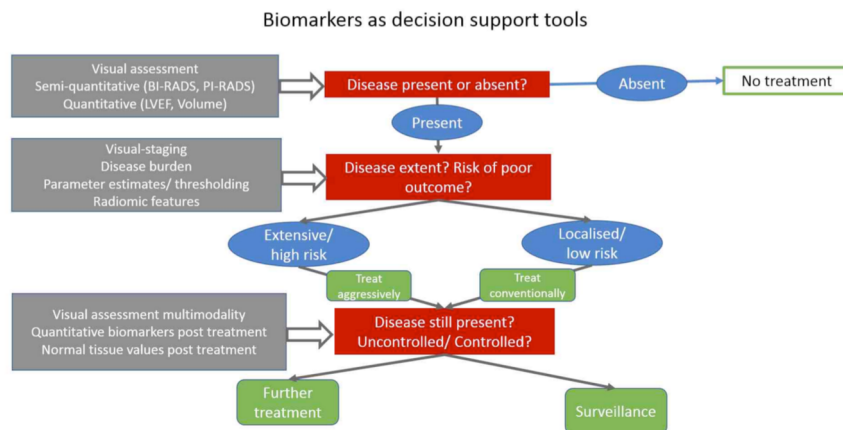
Aim:

- To set out current evidence and future recommendations of the processes to be adopted to support the use of semi-quantitative or quantitative biomarkers as decision-support tools in clinical trials and ultimately in clinical practice.
- Draft uploaded
- Some input so far, but a lot missing

Should this be a general manuscript about processes to be adopted?

Should we split into oncology and non oncology?

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Position paper on standardization and validation of biomarkers – A. Alberich-Bayarri

Aim:

- To define an imaging biomarkers validation profile and a corresponding model for performance testing that could be suggested to manufacturers.
- Draft uploaded
- Discussions on the process for validation of imaging biomarkers

To include: can we accept a certain degree of heterogeneity in imaging biomarkers results?

Role of AI in validation?

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Imaging Biomarker White paper – F. Gallagher

- Ferdia Gallagher & James O'Connor
- Input from:
 - ESR Research Committee
 - EIBALL
 - EIBIR
 - ESHJ^{MT}
 - EANM and ESMI have yet to be approached
- Will cover all aspects of biomarkers: CV, MSK, Oncol, Neuro
- How will new imaging biomarkers be validated
- Focus on the clinical relevance and translation

EIBALL-QIBA Profile on ASL - X. Golay

- Establishment of fortnightly meetings to move the EIBALL-QIBA Profile ahead (starting October 1).
- Round Robin plan of the use of Gold Standard Phantoms' ASL Q&A perfusion phantom planned to gather the data needed to establish the precision and bias of the Biomarker with respect to a Gold Standard.
- Set-up of an ASL Perfusion working group meeting in Ann Harbor (MI), to update the recommendations on ASL for a 'White Paper II', in collaboration with the EIBALL-QIBA ASL Profile Committee.

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EIBALL and EIBIR

Implementation of biomarkers through interaction in the COST initiatives

Renal (PARENCHIMA, up and running)

Brain (Gliomas)

Gynae (application submitted)

Proposal for EIBALL workshop – L. Fournier

• Morning

1. Introduction: what is a biomarker
J O'Connor?

2. Basics of measurements: quality of a measure, sources of error, types of variability...
A Alberich-Bayarri

3. Basics of statistics: power of studies, sensitivity, specificity, VPP, VPN, impact of incidence...
tbd

4. Old and new methods to validate a biomarker: clinical trials, meta-analysis, retrospective studies, real-life studies
tbd (someone from EORTC?)

• Afternoon: Hands on

1. Analysis of representative publications

ex: validation of CT in pulmonary embolism (PIOPED3, I think) discussing issues such as who performed the study (pneumologists), the difficulty when the new technique is better than the gold standard

ex: choosing the right population for the trial to reflect the population it will be used on...

2. Workshop

small groups must write a research project formulating principal hypothesis, inclusion/exclusion criteria, evaluation criteria, etc...

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Proposal for EIBALL workshop

Questions:

- **When do we do it? (around ECR, at ECR, other venue?)**
- **Speakers to be found**

EIBALL joint session at ECR

Session Title: **Imaging biomarkers and their combinations in the era of artificial intelligence**

Date/Time: **Wednesday, February 27, 2019/08:30-10:00**

Chairpersons: Olivier Clément; Paris/FR; Nandita M. deSouza; Sutton/UK

- **Building and discovering biomarkers with AI (25 min).....Bastien Rance; Paris/FR**
- **COST action initiatives as a platform for image biomarker selection (25 min)....Anna Caroli; Ranica/IT**
- **AI for managing imaging biomarkers: friend or foe? (25 min).....John C. Waterton; Manchester/UK**

Panel discussion: What infrastructure do we need to exploit AI for selecting, validating and managing imaging biomarkers? (10 min)

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EIBALL information

- ESR website
- AOB
- Date of next meeting

CLOSE