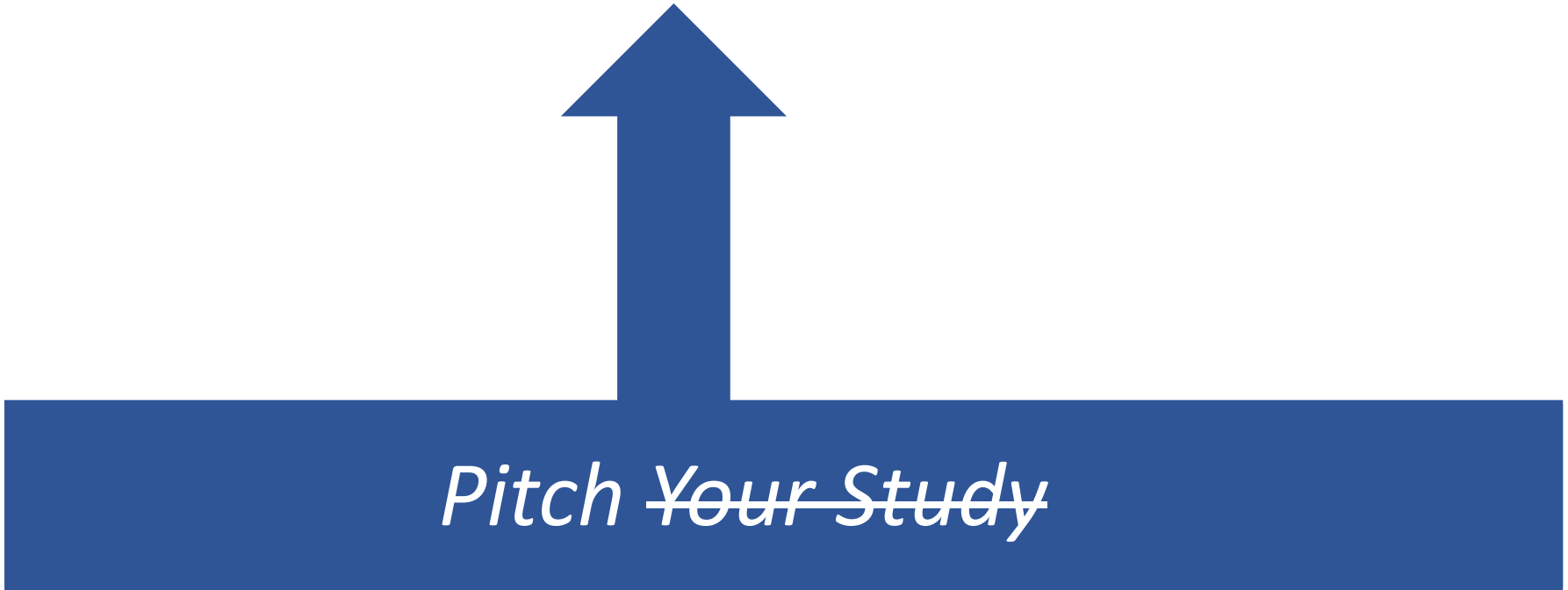
Towards guidelines for treatment volume definition and dose reporting in endoluminal rectal cancer boosting

Pitch Your Study

Aim

Pitch for collaboration!



Background

- pCR after neoadjuvant chemoradiation 15-20%
- Radiation boost → increase pCR
- Which technique?
- Which margins?

1. Acute and Late Toxicity of endoluminal radiotherapy

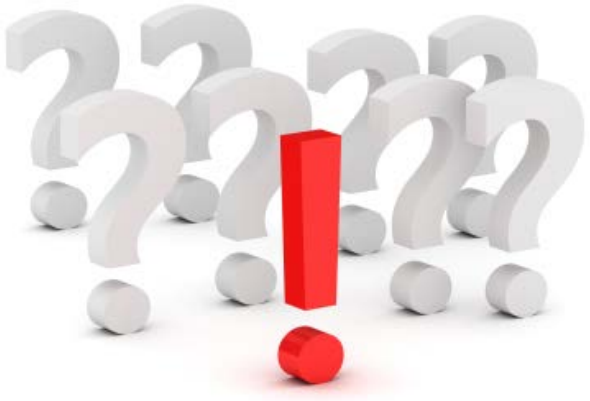
- Systematic Review
  - Pubmed search
  - HDR, LDR, PDR brachytherapy, CXT
- 35 papers → 2591 patients for analysis

Acute and Late Toxicity: Results

- Toxicity after CXT confined to rectum
- Brachytherapy also caused acute urinary toxicity

- Other than that: no conclusions → HOW?!

Acute and Late Toxicity: Results



- Combinations of endorectal techniques
- **Lack of clear reporting** of toxicity scores
- **Inconsistent** dose reporting
- **Unclear** treatment technique
- **Hardly any mention** of treatment volumes

2. Microscopic extension

- Meta-analysis based on individual patient data
- Estimate the residual tumor volume/extension underneath normal appearing mucosa
- Evidence-based guidelines that define an appropriate treatment volume and patient selection

Meta-analysis Results

- 8 papers fit criteria

- 4 papers individual patient data (still waiting for 2 more databases)
  - 225 patients
  - Some missing data

- Microscopic extension outside of visual lesion:
  - Average: **4.6 mm**
  - 85% of patients: **3 mm**
  - 90% of patients: **7.4 mm**

- Factors that increase risk of microscopic extension?

- **Conclusion:**

  - No one knows what the key determinants for toxicity are and what the best way of dose reporting is

  - No one knows how to select patients for endoluminal radiation boost

  - Everyone reports in their own way → impossible to find out how we can improve

- **Conclusion:**
  - Need for consortium
  - Collaboration with radiation oncologists and physicists in brachytherapy field as well as contact therapy field
  - Learn from each other

- **Conclusion:**

  - Goal is NOT to standardize treatments

  - Standard way of dose reporting, toxicity scoring, treatment volume definitions

Main aim is to generate 'common language' and not 'common treatment'

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