Proposed study:

APHRODITE - A Phase II trial of Higher Radiotherapy Dose In The Eradication of early rectal cancer

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• **Aim:**
Can dose escalation increase the cCR rate with acceptable toxicity in patients with early rectal cancer who are not suitable for radical surgery?

• **Design:**
Phase II multicentre randomised trial

• **Patients:**
**Patients with early rectal cancer not suitable for radical surgery and for whom radiotherapy treatment is indicated**
- T1-T3b (up to 5mm extra-mural spread), M0
- N0 or N1 disease on MRI (positive lymph nodes confined to mesorectum)
- Max tumour diameter 4cm
- ECOG PS 0-2
- Patient not thought to be suitable for radical TME resection of their tumour by treating team

**Pitch Your Study**
Pitch Your Study

Radiotherapy – mesorectal IMRT
- Control
  CTV 50.4y GTV 50.4 in 28F
- Experimental
  CTV 50.4Gy GTV 62.0Gy in 28 F

Concurrent chemotherapy
- Capecitabine or 5FU

Research question
- Does dose escalation increase CCR with acceptable toxicity

Primary end point
- Complete clinical response @6/12

Key secondary end points
- Acute toxicity
- PROMS (EORTC QLQ-C30 and CR29, EQ-5D and LARS) baseline, 3, 6, 9 and 12/12
- Organ preservation rate
Daily CBCT image guidance

Pitch Your Study
What will this study will teach us?

- Effect of dose escalation on clinical complete response
- Use of chemoradiotherapy as alternative to surgery in elderly and frail patients with early cancer
- Contribute to radiosensitivity translational research
- Data for later studies in non-frail patients
• **Number pts needed:**
  104 patients
  • Assume 20% absolute difference in cCR at 6 months post-treatment
  • cCR rate of 35% in the standard CRT, 55% cCR in dose escalation arm.
  • 80% power, 1-sided type 1 error rate of 20
  • 5% loss to follow-up
  • 1:2 allocation ratio
  • The design is robust to variation in the standard arm cCR rate; i.e. a 20% difference from a standard cCR rate of 25% will still be detectable with the proposed sample size.

• **Small UK study (~8 centres, recruitment over 2 years)**

• **Contact information**
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