ACT 4
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PersonaLising Anal cancer radioTherapy dOse

ACT4 Clinical trial final results

A new, treatment option for early-stage anal cancer

For many years, people with anal cancer have received the same high dose of radiotherapy, regardless of how small or early their cancer is. While this approach can be effective, it often causes serious side effects that affect patients' quality of life during treatment and for years afterwards.

What was the purpose of the trial?

The **ACT4 trial** was designed to test whether a **lower dose of radiotherapy** could still cure early-stage anal cancer while reducing side effects and making treatment easier for patients.

The trial involved **163 patients** from 28 hospitals across the UK. All participants had small, early-stage anal cancers.

They were randomly assigned to receive either:

- **Standard-dose radiotherapy** (28 sessions over 5.5 weeks), or
- **Reduced-dose radiotherapy** (23 sessions over 4.5 weeks)

Both groups also received the same chemotherapy drugs during their radiotherapy treatment. The main goal was to see how many patients remained free of cancer in the treated area three years after randomisation. The trial also looked at side effects and how patients felt during and after treatment.

What did the results show?

The final results showed the following:

Cancer control:
After 3 years, **88%** of patients in the reduced-dose group were still cancer-free, compared to **84%** in the standard-dose group.

Side effects:
Fewer patients in the reduced-dose group experienced serious side effects during treatment compared to the standard dose group (35% vs. 46%).

Quality of life:
Patients in both groups felt worse at the end of treatment, but on average returned to a point close to normal within 6 weeks to 6 months.

By 6 months, patients in both groups reported quality of life scores that were as good as or better than the general UK population.

Bowel and bladder function were good in both groups. Bowel function was slightly better in the reduced-dose group by 3 years.

Sexual function issues for men and women improved after treatment more quickly in the reduced-dose group and remained slightly better than the standard dose group over time.

Why is this important?

This is the **first trial in the world** to use a questionnaire specifically designed for anal cancer patients to understand their experience during and after treatment. The results show that the **shorter, lower-dose treatment** can be just as effective as the standard-dose treatment, with **fewer side effects during treatment** and an **excellent quality of life**.

What will happen now?

This lower dose could become the **new standard of care** for people with early-stage anal cancer, offering a **shorter, smarter, kinder treatment** that benefits patients, their families, and the healthcare system

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