



## Extended Research Article

# Rational treatment selection for primary Merkel Cell Carcinoma: a Rational MCC RCT comparing surgery and radiotherapy with parallel observational study

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## Plain language summary

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## Plain language summary

**M**erkel cell carcinoma is a skin cancer affecting only 250–300 people in the United Kingdom each year. Its rarity means clinicians advise patients on available treatments based on their experience of past cases rather than on the basis of evidence from past clinical trials.

Merkel cell carcinoma starts on the skin (known as the primary), grows quickly and often spreads to nearby lymph nodes in the neck, armpit or groin. It must be treated effectively or it quickly regrows. The primary Merkel cell carcinoma is removed by specialist surgeons who can remove the lesion with a good margin of healthy tissue and who can decide on the possibility of accurate staging. To get a good clearance, large areas of tissue may need to be removed. These patients often need specialist repair after surgery, as well as the consideration of sentinel node staging at the time of surgery, and then possibly radiotherapy. Some patients are instead treated by radiotherapy right away, reducing the need for repair, allowing delivery of radiotherapy sooner.

The Rational Merkel cell carcinoma trial was designed to fairly compare surgery or radiotherapy for primary Merkel cell carcinoma so the trial results could help patients and doctors make the best decision for treatment, taking into account other issues for that person, such as which bit of the body the Merkel cell carcinoma was on, their age and fitness, and preferences.

People with Merkel cell carcinoma are typically elderly and are referred to travel long distances to specialist centres. Treatment requires co-ordination between specialists. Unfortunately, we found that the trial was not feasible with only five patients entered. We recognised this risk of failure in advance and stopped the trial. The patients all underwent their allocated treatment (three had radiotherapy and two surgery, one with radiotherapy following surgery), and after 2 years, the Merkel cell carcinoma has not come back in these patients. However, it was not possible to say with certainty from these small numbers whether surgery or radiotherapy should be offered as the first treatment. An additional 59 patients, concurrently treated for Merkel cell carcinoma but not entered into the comparison, still contributed data on the patient, tumour, treatment and disease control. This meant the trial still collected useful data along with immune measurements and tumour samples from this rare group of patients for further study.

Information on the experience of running this trial and use of a novel trial design may help with design of future research to help people with rare cancers.

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## This article

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