乳がん放射線治療後の局所再発率低下が認められた（Abstract # S4-1）

UK START：10年のフォローアップの結果、早期乳がん治療のための小分割放射線療法は安全で有効であった

UK START: Hypofractionated radiotherapy was safe and effective for early breast cancer treatment at 10-year follow-up

適正線量の小分割放射線療法は健康組織への負担が軽く局所ー領域早期乳がんコントロールに有効であるとのU.K. Standardization of Breast Radiotherapy Trials（START）の結果が、2012 CTRC-AACRサンアントニオ乳がんシンポジウムで発表された。1999～2002年の間に浸潤性乳がんを完全切除された女性4,451人がSTART AまたはSTART Bいずれかの無作為化コントロールトライアルに組み入れられた。START Aでは術後放射線療法を50Gy（25 fraction）で5週間にわたり施行される群と、41.6Gy（13 fraction）または39Gy（13 fraction）を5週間にわたり施行される群とを比較した。START Bでは50Gy（25 fraction）で5週間施行する群と40Gy（15 fraction）を3週間施行する群とを比較した。データの結果、START Aで平均9.3年間追跡された女性2,236人においては139件の局所腫瘍再発が認められ、平均9.9年間追跡されたSTART Bでは2,215人の女性において95件の局所再発が認められた。10年局所ー領域再発率は、START Aで50Gy照射後は7.4%、41.6Gy照射後は6.3%、39Gy照射後は8.8%であった。3週間15 fractionスケジュールが現在英国における標準治療であり、他の国々においてもますます一般的になりつつある。

Full Text

Appropriately dosed hypofractionated radiotherapy was gentle on healthy tissues and effective in controlling local-regional early breast cancer, according to 10-year follow-up results from the U.K. Standardization of Breast Radiotherapy Trials (START), presented at the 2012 CTRC-AACR San Antonio Breast Cancer Symposium.

"Long-term follow-up confirms that a lower total dose of radiation in fewer, slightly larger fractions delivered over a shorter treatment time is at least as safe and effective as standard five-week schedules of curative radiotherapy in women with early breast cancer," said John Yarnold, M.B.B.S., professor of clinical oncology at The Institute of Cancer Research in London and honorary consultant at The Royal Marsden NHS Foundation Trust.

Between 1999 and 2002, 4,451 women with completely excised invasive breast cancer were recruited to either the START A or START B randomized controlled trials. In START A, researchers compared 50 Gy of postsurgery radiotherapy given in 25 fractions for five weeks versus 41.6 Gy or 39 Gy in 13 fractions for five weeks. In START B, they compared 50 Gy in 25 fractions for five weeks versus 40 Gy in 15 fractions for three weeks.

Data revealed 139 local-regional tumor relapses among the 2,236 women in START A who were followed for an average of 9.3 years and 95 local-regional relapses in the 2,215 women in START B, followed for an average of 9.9 years.

The 10-year local-regional relapse rates for START A were 7.4 percent after 50 Gy, 6.3 percent after 41.6 Gy and 8.8 percent after 39 Gy. In previously published data from START B, the 10-year local-regional relapse rate was 5.5 percent after 50 Gy and 4.3 percent after 40 Gy.

"These long-term data from the START A trial confirm the findings of our earlier results that breast cancer is, on average, as sensitive to the radiation dose of each fraction as the dose-limiting normal tissues of the breast area and that this effect persists for at least 10 years," Yarnold said.

However, a five-week, 13-fraction schedule does not offer shortened overall treatment times. "Hence, we also designed the START B trial, a pragmatic comparison of three-week and standard five-week schedules, testing for noninferiority," said Yarnold. "The 15-fraction schedule is definitely gentler on the healthy tissues, and these long-term data confirm our earlier findings that it appears noninferior in terms of tumor control — a very favorable result."

The three-week, 15-fraction schedule is now the standard of care in the United Kingdom and is becoming increasingly more common in other countries, according to Yarnold. Future research is focused on the molecular mechanisms that determine fraction size sensitivity, which may lead to individualization of fraction size.

"It is likely that some breast cancers are more or less sensitive than others," Yarnold said. "We are also testing a one-week schedule of whole breast radiotherapy against our new three-week standard in the U.K. FAST-Forward Trial."

The START trials were funded by Cancer Research U.K., the U.K. Medical Research Council and the U.K. Department of Health.

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