Translation of IDEA trial results into clinical practice: analysis of the implementation of a new adjuvant treatment guideline for colon cancer

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Background

The pivotal IDEA trial showed marginal differences in survival outcomes for 3 vs 6 months of adjuvant chemotherapy (ACT) in stage II and III colon cancer (CC). Severe treatment toxicity was substantially lower in the short treatment regimen. Therefore, in 2017 the Dutch colorectal cancer (CRC) guideline was revised and currently recommends 3 months of oxaliplatin (OX)-based ACT.

In addition, the definition of high-risk stage II CC limited to only pathological T4 (pT4) tumors only (instead of presence of poor differentiation, lymph node harvest <10, lymphovascular invasion and perforation/obstruction at presentation).

Objective

Evaluation of adherence to the revised colon cancer guideline in The Netherlands in which IDEA results were incorporated.

Methods

From the population-based Netherlands Cancer Registry (NCR) all 16,721 patients ≥18 years with resected high-risk (risk factors according to previous guideline) stage II and III CC from 2015-2019 were selected.

The implementation of the new guideline was analyzed by comparing duration of ACT between incidence years (one-way analysis of variance) and differences in patient characteristics between incidence years (Chi-square tests). Treatment patterns and chemotherapy regimens were analyzed according to stage and age.

Results

Mean duration of OX-based ACT decreased from 18.6 (± 8.0) weeks in 2015 to 9.5 (± 3.8) weeks in 2019. (Fig 1.)

The proportion of patients receiving ACT was stable over time, 61-69% in stage III and 26-29% in pT4 stage II.

ACT in patients with previous high-risk pT3N0 disease decreased from 15% to 3% before and after guideline revision

Of all patients receiving ACT (n=8,170), the proportion treated with CAPOX increased from 75% in 2015/2016 (before guideline revision) to 83% in 2018/2019 (after guideline revision). Most pronounced was the increase of OX-based ACT increased from 27% to 49% in patients ≥75 years old. (Fig 2.: ACT regimens according to age).

Intravenous 5-fluorouracil (5-FU) containing ACT was administered in 5% of patients in 2015/2016 and decreased to 2% in 2018/2019.

Fig. 1. Mean duration of ACT in weeks

Fig. 2. A: ACT regimens in pts <75 years old

Fig. 2. B: ACT regimens in pts ≥75 years old

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Conclusion

The revised Dutch CRC guideline, recommending 3 months of ACT and limitation of ACT in stage II to pT4N0 CC, was rapidly implemented in clinical practice. The shortened duration of ACT led to an increase in OX-based ACT especially in elderly patients.

The first author declares no conflict of interest.