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IN BRIEF

PROSTATE CANCER

CTCs enable early prediction of response

Changes in serum prostate-specific antigen (PSA) levels, commonly used to evaluate the response of patients with metastatic castration-resistant prostate cancer to treatment, correlate poorly with overall survival. Circulating tumour cell (CTC) counts were explored as an end point in five prospective randomized phase III trials (total $n = 6,081$ patients). Among five CTC-based and three PSA-based end points, CTC0 (CTC count ≥1 at baseline and 0 at week 13) and CTC conversion (CTC count ≥5 at baseline and ≤4 at week 13) had the highest discriminatory power with respect to overall survival. In the trials analysed, CTC0 was reported for 75% of patients, but only 51% of these patients had CTC conversion. CTC0, a clinically meaningful end point that occurs shortly after treatment initiation, was deemed more reliable than PSA changes.

ORIGINAL ARTICLE Heller, G. *et al.* Circulating tumor cell number as a response measure of prolonged survival for metastatic castration-resistant prostate cancer: a comparison with prostate-specific antigen across five randomized phase III clinical trials. *J. Clin. Oncol.* http://dx.doi.org/10.1200/JCO.2017.75.2998 (2017)

HAEMATOLOGICAL CANCER

Improved sensitivity in MRD detection

Measurable residual disease (MRD) was evaluated using high-throughput sequencing (HTS) of the *IGH* and *TRG* genes or flow cytometry following induction chemotherapy in 619 paediatric patients with newly diagnosed B cell acute lymphoblastic leukaemia (B-ALL). Using an MRD threshold of 0.01%, the 5-year event-free survival (EFS) and overall survival were similar regardless of whether MRD had been determined by HTS or flow cytometry. For 55 patients, MRD was >0.01% according to HTS, but negative by flow cytometry. These patients had worse 5-year EFS than those with MRD >0.01% according to HTS. Thus, HTS has a higher analytical sensitivity than flow cytometry for the detection of MRD after induction chemotherapy in paediatric B-ALL.

ORIGINAL ARTICLE Wood, B. *et al.* Measurable residual disease detection by high throughput sequencing improves risk stratification for pediatric B-ALL. *Blood* http://dx.doi.org/10.1182/blood-2017-09-806521 (2017)

GASTROINTESTINAL CANCER

Novel promising first-line combination

Among the treatments that patients with metastatic colorectal cancer (mCRC) commonly receive as first-line therapy, mFOLFOX6 (5-fluorouracil, leucovorin (folinic acid) and oxaliplatin) and CapeOX (capecitabine and oxaliplatin) are associated with a high incidence of toxicities. A phase III trial was conducted to assess the non-inferiority of first-line oral fluoropyrimidine S-1 and irinotecan compared with mFOLFOX6 or CapeOX in terms of progression-free survival (PFS): 243 patients received mFOLFOX6 or CapeOX plus bevacizumab (control group) and 241 patients received S-1, irinotecan and bevacizumab (experimental group). The median PFS duration was longer in the experimental group versus the control group (14.0 months versus 10.8 months). The incidence of adverse events of grade ≥3 was 58.6% and 64.9% respectively. Thus, the S-1 and irinotecan regimen was deemed non-inferior to standard first-line therapies for mCRC and could become a new standard treatment option.

ORIGINAL ARTICLE Yamada, Y. *et al.* S-1 and irinotecan plus bevacizumab versus mFOLFOX6 or CapeOX plus bevacizumab as first-line treatment in patients with metastatic colorectal cancer (TRICOLORE): a randomized, open-label, phase 3, non-inferiority trial. *Ann. Oncol.* http://dx.doi.org/10.1093/annonc/mdx816 (2017)