SUMMARY

The European Cancer Congress (ECC 2015) combined the 40th European Society for Medical Oncology (ESMO) congress with the 18th congress of the European CanCer Organisation (ECCO) and was held 25 to 29 September, 2015. The meeting was organised in partnership with the European Society of Radiation and Oncology (ESTRO), the European Society of Surgical Oncology (ESSO), the European Academy for Cancer Research (EACR), the European Oncology Nursing Society (EONS), and International Society of Paediatric Oncology (SIOPE). The efforts of all partner organisations were united to continue advancing multidisciplinarity as the way forward to optimise the prevention, diagnosis, treatment, and care of cancer patients by encouraging participants to leverage knowledge, promote education and build awareness for patient-centred oncology.
A sub-analysis of the NEXT study shows biosimilar filgrastim is safe and controls development of febrile neutropenia in patients with lung cancer undergoing cytotoxic chemotherapy.

Visualization and relaxation as anxiety reducing techniques in breast and prostate cancer patients undergoing chemotherapy: Findings from a randomised controlled trial.

Improved emesis control with adjunct fosaprepitant in women receiving pelvic radiotherapy plus cisplatin for cervical cancer.

Supersaturated calcium-phosphate rinse better than sodium chloride in oral complaints in patients receiving TKI or mTOR inhibitor treatment for various cancers.
A sub-analysis of the NEXT study shows biosimilar filgrastim is safe and controls development of febrile neutropenia in patients with lung cancer undergoing cytotoxic chemotherapy

Didier Kamioner, Hopital Prive de l'Ouest Parisien, Paris, France presented findings from a sub-analysis of data from patients with lung cancer participating in the NEXT Trial, which was conducted in multiple centres throughout France as a prospective, non-interventional, longitudinal study to assess the incidence of febrile neutropenia and infection as well as safety following treatment with biosimilar filgrastim. Patients were evaluated upon study inclusion, during treatment and after chemotherapy. NEXT enrolled 2114 patients who were treated with chemotherapy for malignancies other than chronic myeloproliferative and myelodysplastic syndrome and also received Nivestim™, a biosimilar filgrastim. Of these, data from 293 patients with lung cancer receiving 1 to 6 cycles of chemotherapy and biosimilar filgrastim were included in the sub-analyses; biosimilar filgrastim was administered as prophylaxis in 98.3% of these patients (primary prophylaxis in 93.1% of patients) and as curative treatment in 1.7% of patients. In this subgroup, 74.7% of patients were male, 28.7% had stage M0 lung tumours, and metastases were identified in 69.1% of patients.

Febrile neutropenia was reported as an adverse event (AE) in 2.9% of patients receiving biosimilar filgrastim as primary prophylaxis and in 10.5% of patients receiving it as secondary prophylaxis. Infection occurred in 3.0% of patients overall receiving biosimilar filgrastim as prophylaxis. Chemotherapy cycles were delayed due to febrile neutropenia in 6.9% and chemotherapy dose reductions were required in 7.3% of prophylactic patients. Hospitalisation was needed for 3.4% of prophylactic patients due to febrile neutropenia or infection for an average of 10.5 days. Overall, 14.6% of prophylactic patients were associated with a high risk of developing febrile neutropenia; 44.6% had intermediate risk and 40.7 of patients were at low risk of developing febrile neutropenia (2010 NCCN guidelines). AEs other than infection or febrile neutropenia were reported in 15.3% of all patients; the most commonly reported AEs that occurred in >2% of patients were muscle and/or bone pain, nausea, headache and other. Kamioner et al. Abstract 1501.

Practice point and future research opportunities

Biosimilar filgrastim (Nivestim™) is a granulocyte-colony stimulating factor (G-CSF) approved for the treatment of infection and febrile neutropenia, which is a frequent and potentially serious
complication of chemotherapy. In this subgroup analysis of patients with lung cancer receiving chemotherapy, biosimilar filgrastim was well tolerated and effective in preventing febrile neutropenia and infection, and provided the majority of these patients with intermediate or low risk of developing febrile neutropenia.

Visualization and relaxation as anxiety reducing techniques in breast and prostate cancer patients undergoing chemotherapy: Findings from a randomised controlled trial

Andreas Charalambous, Cyprus University of Technology, Nursing Department-School of Health Sciences, Limassol, Cyprus discussed a form of care that can ameliorate the anxiety and depression caused by cancer diagnoses and treatment that is reflected by the high prevalence rate of depression and anxiety in cancer patients, which is estimated to range between 55 to 65%. Prolonged distressed emotional states may lead to additional somatic problems or induce behavioral changes that can have further debilitating effects on the patients’ psychological well-being and overall quality of life.

In this randomised controlled trial, 212 patients with breast or prostate cancer undergoing chemotherapy were randomly assigned 1:1 to either the control group, to receive standard care, or to the intervention group, which included relaxation and visualization techniques. Patients were observed for 3 weeks and assessed with the SAS and BECK-II questionnaires for anxiety and depression, respectively. In addition, cortisol and saliva amylase levels were measured in patient saliva samples.

The 106 patients in the intervention group showed significantly lower anxiety change scores and depression change scores of −6.3±6.1 and −17.7±7.3, respectively, than 106 patients in the control group, where score changes were 4.9±5.9 and 11.7±8.5, respectively (p < 0.00001). Baseline cortisol levels in the intervention group were 0.03±0.25, were seen to gradually decrease up to week 3 to 0.16±0.18, whereas baseline cortisol levels in the control group levels were 0.21±0.22 and were seen to double by week 3 to 0.44±0.35. Similar results were reported for amylase levels (p < 0.0001). NCT01275872. Charalambous et al. Abstract 1502.

Practice point and future research opportunities

Although the mechanisms by which cognitive behavioral interventions can modify or interfere with the stress response to external stimuli remain unknown, these trial findings show that relaxation and visualization techniques more effectively manage patients’ anxiety and depression than
standard treatment alone in patients diagnosed with breast or prostate cancer receiving chemotherapy.

Improved emesis control with adjunct fosaprepitant in women receiving pelvic radiotherapy plus cisplatin for cervical cancer

Christina H Ruhlmann, Odense University Hospital, Odense, Denmark presented findings from the first study to address emesis control, a cornerstone of palliative care, in women receiving pelvic radiotherapy. In the GAND-emesis trial, fosaprepitant, a neurokinin-1 receptor antagonist, was added to an anti-emetic regimen and demonstrated significantly improved emesis control in women being treated with radiotherapy and cisplatin for cervical cancer, where treatment–related vomiting accounts for a majority of adverse events and study discontinuation. Emesis control has been most often investigated in chemotherapy trials, although nausea and vomiting are known to be a major adverse effect of delivering radiotherapy to the abdominal area; moreover, neurokinin-1 receptor antagonists had not previously been evaluated for efficacy with radiation.

This was an investigator initiated multinational randomised double-blind placebo-controlled phase III trial that enrolled 246 chemotherapy and radiotherapy naive women with cervical cancer from 4 European centres. Patients with scheduled brachytherapy prior to the radiation fraction or with the diagnosis of another other concurrent malignancy were excluded from the study, as were patients experiencing emesis or moderate to severe nausea within the 24 hours preceding the first dose of study medication. All patients received a regimen of 5 fractions per week of radiotherapy at 2 Gy to the pelvis (median Gy 50 external beam radiation therapy dose), plus anti-emetic prophylaxis with intravenous palonosetron plus oral dexamethasone prior to the administration of cisplatin at 40 mg/mg2 given on day one weekly for 5 weeks. Both cohorts also received dexamethasone twice daily on days 2, 3, and 4 of each cycle, which was repeated for 5 weeks. Patients were allowed anti-emetic rescue medication. The patients were randomised to receive either 150 mg i.v. fosaprepitant daily or placebo in addition to this regimen and daily patient diaries were maintained. The primary endpoint was the no emesis rate sustained over days 1 through 35, and secondary endpoints were complete response (CR), nausea, and safety. Efficacy assessments were made daily and safety assessments were made weekly. In all, 234 patients, 118 in the fosaprepitant arm and 116 in the control arm, received study medication and were eligible for the efficacy evaluation. Patient baseline characteristics were well matched between groups.

Patients receiving fosaprepitant plus anti-emetics demonstrated a statistically significant higher sustained no emesis rate of 76.7% compared to 65.1% in patients receiving standard anti-emetics;
95% CI 0.38, 0.99 (p = 0.048). The cumulative incidence over the course of the trial was lower with fosaprepitant, with patients experiencing 17% less emesis on average: During weeks 1, 2, 3, 4, and 5 no emesis was sustained by 86%, 78%, 73%, 69% and 66% of patients receiving fosaprepitant compared with 78%, 66%, 59%, 53% and 49% of patients receiving anti-emetics only (p = 0.008). At 168 hours (cycle one end) the rates of no nausea were 42% with fosaprepitant compared to 25% with placebo (p = 0.005). CR, defined as no emesis and no use of rescue anti-emetics within 24 hours post initiation of therapy, was achieved by 92% of fosaprepitant patients versus 86% of placebo. CR at 120 and 168 hours post therapy was 74% and 71% versus 64% and 59% in the respective cohorts. CR over days 1 to 35 was achieved by 51% of fosaprepitant patients versus 33% of placebo patients (p = 0.005) and no nausea was sustained over the same duration by 14% versus 8% of fosaprepitant and placebo patients, respectively (p = 0.009).

The adverse events (AE) profile of both cohorts was similar: The most commonly reported (affecting 10 or more patients) AEs were loss of appetite, fatigue, headache, dizziness, hearing impairment, tinnitus and nervous system disorders. NCT 01074697. Ruhlmann et al. Abstract 34LBA.

**Practice point and future research opportunities**

This study is to be congratulated for addressing the issue of nausea and vomiting involving radiation delivered to the abdomen, since most studies on emesis control are done with chemotherapy. Adding fosaprepitant to palonosetron and dexamethasone provided significantly better emesis and nausea control over palonosetron and dexamethasone alone in women receiving chemoradiation for cervical cancer; the findings were both statistically and clinically significant.

**Supersaturated calcium-phosphate rinse better than sodium chloride in oral complaints in patients receiving TKI or mTOR inhibitor treatment for various cancers**

Christine Boers-Doets, Leiden University Medical Centre, Leiden, The Netherlands, headed a team that evaluated the utility of a supersaturated calcium-phosphate mouth rinse, SCPR/Caphosol®, in decreasing oral complaints, including aphthous ulcerations, oral pain, taste change, difficulty swallowing, difficult oral intake, burning sensation and dry mouth, compared with NaCl (0.9%) in cancer patients being treated with tyrosine kinase inhibitors (TKIs) and mammalian target of rapamycin (mTOR) inhibitors. The double-blind phase III randomised cross-over study enrolled 60 patients experiencing oral complaints while being treated with either a TKI or mTORi. During the
first rinse period comprising 14 days, 20 patients received SCPR and 39 patients received NaCl.
For the second 14 day period, the patients were switched to the opposite treatment arm; 10 of 20
SCPR patients were given NaCl and 27 of 39 NaCl patients received SCPR. The patient-reported
oral complaints were evaluated 3 times weekly by the change in the Vanderbilt Head and Neck
Symptom Survey 2.0 (VHNSS) scores, using a 10-point scale.

Of the enrolled patients, 19 were receiving everolimus, 16 sunitinib, 14 pazopanib, 10 sorafenib
and one was on temsirolimus. Treatment was for metastatic renal cell carcinoma in 24 patients,
metastatic breast cancer in 11, gastrointestinal stromal tumours in 6, hepatocellular carcinoma in 5,
and 13 patients had other diagnoses. One patient was inevaluable.

The median VHNSS score consisting of 48 items regarding oral complaints was 0.88 (range: 0 to
5.51) for all patients. This score was significantly lower in the SCPR arms at median 0.74 (range: 0
to 4.85) compared to median 1.04 (range: 0 to 5.51) in the NaCl arms (p = 0.023). Mixed model
ANOVA showed a 50% reduction (p = 0.1) of total median VHNSS score (1.64 to 0.81) in the NaCl
arm during the first period. Before cross-over, the VHNSS scores decreased significantly for the
NaCl arm over time (p = 0.001), whereas these scores showed a decrease or borderline
significance (p = 0.085) for the SCPR arm, which may have been affected by the small sample size
of patients starting with SCPR rinse. The effect of the SCPR rinse was more prominent in the
larger group of patients beginning with NaCl rinse in the first period of study treatment.

The greatest effect with SCPR was noted in the subgroups of patients with dry mouth and burning
sensation. For dry mouth, the SCPR median score was 0.31 (range: 0 to 6.25) versus median 0.50
(range 0 to 7.63) with NaCl (p = 0.004) and for burning sensation, SCPR patients reported median
scores of 0.75 (range: 0 to 10) versus a median score of 1.25 (range 0 to 8.50) with NaCl (p =
0.017). Boers-Doets et al. Abstract 35LBA.

**Practice point and future research opportunities**

Supersaturated calcium-phosphate rinse shows promise for minimising oral complaints associated
with treatment for cancer with TKIs and mTORis, especially dry mouth and oral burning sensation.
Reducing treatment side effects is an important aspect of medical treatment of cancer.
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Disclosure

No conflicts of interest to disclose.

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