

not appear to affect the safety profile of aflibercept. Although analysis of a prespecified subgroup, this study was not powered to show a treatment difference between arms; therefore, no definitive conclusions can be drawn concerning the benefit of aflibercept in the prior BEV-treated subgroup.

## Docetaxel Is Widely Used In Treatment of Breast Cancer in China

Findings from “Patterns of docetaxel application in breast cancer patients from China: Experience in 42 cancer centers” show that docetaxel is widely used for treating breast cancer, especially as adjuvant and/or neoadjuvant therapy. Binghe Xu, MD, PhD, Chinese Academy of Medical Sciences, Beijing, China, presented results from the study.

This retrospective review was carried out in China from 2009 to 2011 [Xu B et al. *J Clin Oncol* 2012 (suppl; abstr e115637)]. The aim of the study was to investigate how patients with breast cancer are treated with docetaxel. It included all patients diagnosed with invasive breast cancer and treated with docetaxel-containing regimens in 42 cancer centers from 12 provinces in China. Regimens were compared in different subgroups based on stage, subtype, and lymph node (LN) status. Patterns of chemotherapy were also compared with published guidelines.

Among 2188 breast cancer patients (mean age, 48.7 years; range, 14 to 82 years) treated with docetaxel, 1881 (86.0%) were in an adjuvant and/or neoadjuvant setting (including

91 in both settings). Only 288 (13.2%) patients received docetaxel as a single agent; 1900 (86.8%) received docetaxel-containing combination regimens. The mean cycle administered was 4.8, and the dose for every cycle was 73.0 mg/m<sup>2</sup>. Dose reduction and delay occurred in 409 (19.0%) patients, caused mainly by nonmedical factors (10.9%) and hematologic toxicity (5.9%).

Docetaxel, doxorubicin, and cyclophosphamide (TAC), docetaxel/doxorubicin (TA), docetaxel and cyclophosphamide (TC), docetaxel (TX), and doxorubicin and cyclophosphamide followed by docetaxel (AC-T) regimens were given in 34.8%, 19.7%, 17.4%, 5.3%, and 2.2% of patients, respectively. TAC was used more frequently in triple-negative breast cancer (TNBC) cases than in other types (43.0% vs 32.7%;  $p=0.004$ ). In the (neo)adjuvant setting, TAC was used more frequently in LN-positive than LN-negative patients (44.2% versus 30.0%;  $p<0.001$ ). Of 1682 patients in the adjuvant setting, 729 (43.3%) were treated with triplet (TAC or AC-T) regimens. Of 290 patients who received neoadjuvant chemotherapy, 94 (32.4%) received TAC and none received AC-T ( $p=0.013$ )

Although most guidelines recommend AC-T in adjuvant settings, investigators found that the TAC regimen was used most frequently in China, especially in patients with TNBC or LN-positive breast cancer.

## Compassionate Use With CbzP Plus Prednisone for mCRPC: Interim Results

The XRP6258 Plus Prednisone Compared to Mitoxantrone Plus Prednisone in Hormone Refractory Metastatic Prostate Cancer [TROPIC; NCT00417079] trial showed that treatment with cabazitaxel (CbzP) produced statistically significant improvement in overall survival versus mitoxantrone plus prednisone in patients with metastatic, castration-resistant prostate cancer (mCRPC) previously treated with a docetaxel-containing regimen (HR, 0.70;  $p<0.0001$ ). Sevil E. Bavbek, MD, Istanbul University Oncology Institute, Istanbul, Turkey, presented interim results from a cohort compassionate-use program (CUP) with CbzP plus prednisone for patients with mCRPC [EAP; NCT01254279; Bavbek SE et al. *J Clin Oncol* (suppl; abstr e15112) 2012].

Results from the TROPIC trial supported the establishment of a CUP and an early access program (EAP). The aims of this Phase 3, single-arm, open-label trial are to provide access to CbzP prior to commercial availability to mCRPC patients who may benefit from it, and to further assess the agent's safety profile. Estimated enrollment is 1600 patients from 250 centers globally. Eligible patients received CbzP in combination with oral prednisone until disease progression, death, unacceptable toxicity, or physician/patient decision.

Baseline characteristics and safety data are available for the first 399 patients. The median age is 68 years (range, 43 to 89); 90.2% of patients had ECOG Performance Status scale 0 to 1. The median cumulative dose of prior docetaxel was 675 mg/m<sup>2</sup>; previous therapy with mitoxantrone plus prednisone was allowed.

The median time from the last dose of docetaxel to progression was 4 months; 53.3% of patients experienced disease progression either during or <3 months after docetaxel therapy; 61% had  $\geq 2$  metastatic sites, most commonly bone (93.2%) and regional lymph nodes (34.4%). At the time of analysis, a median of four cycles of CbzP had been administered; four patients received  $\geq 10$  cycles.

Median relative dose intensity was 99.2% (range, 80.1 to 104.9). Granulocyte colony-stimulating factor was administered to 34.3% of patients in Cycle 1 (6.3% therapeutic, 26.6% prophylactic). Overall, 71.4% of patients had adverse events

(AEs). The most common grade 3 to 4 AEs were neutropenia (11.3%), febrile neutropenia (6.3%), anemia (2.8%), fatigue (2%), neutropenic sepsis (1.8%), vomiting (1.3%), and diarrhea (1%). Eight (2%) treatment-related deaths were reported.

The investigators concluded that CUP/EAP provides additional safety data for CbzP in a routine clinical practice patient population with heavily pretreated mCRPC. Treatment was tolerable, with a predictable and manageable toxicity profile consistent with data reported for TROPIC and product labeling.

## Affordability of Cancer Care: A Global Perspective

### *Increasing Cancer Burden and Globalization*

The incidence of cancer is expected to rise substantially by 2030, because of the increasing world population, aging, and the introduction of cancer risk factors from developed countries to risks that already exist in low- and medium-resource countries. An expected 1% per annum increase in cancer incidence will result in approximately 26 million new cases in 2030, with most of the increased in developing countries [Thun MJ et al. *Carcinogenesis* 2010]. Patients in low-resource countries typically present with advanced cancer. Obstacles to prevention, early detection, and therapy include scarce human resources, financial barriers, lack of radiotherapy facilities, limited access to anti-cancer drugs and palliative care, and insufficient coordinated action.

According to Peter Boyle, PhD, DSc, International Prevention Research Institute, Lyon, France, the current model is broken. An international policy based on collaboration is needed, with a global consortium that involves governmental and nongovernmental organizations, the pharmaceutical industry, and other partners.

Successful models for tackling this critical problem include: the Academic Model Providing Access to Healthcare, which aims to deliver essential primary care services, control HIV, and mitigate the social and economic consequences of HIV/AIDS; the School of Nursing and Midwifery, University of Dundee, Scotland, UK, which provides distance health education in low- and middle-income countries; Hospice Africa Uganda, which provides palliative care and education in palliative care; and the Susan G. Komen Global Alliance in low-income countries.

### *Cost and Effectiveness of New Cancer Treatments*

Ian Tannock, MD, PhD, University of Toronto, Toronto, Ontario, Canada, discussed the high cost of cancer treatments relative

to their effectiveness. Many new drugs provide small gains at a high price.

Dr. Tannock and colleagues found that only 37% of 25 new targeted agents approved by the US Food and Drug Administration (FDA) cost <\$100,000/life-year gained. The cost of new targeted agents needs to be reduced by a median 78% to be cost-effective, even in Western countries. The investigators recommended that registration of new anticancer drugs should require value-based pricing that renders them cost-effective. In addition, healthcare rationing is essential to ensure fair distribution of limited resources, regardless of a country's wealth.

Drug pricing is based more on maximizing profits than clinical benefit and is the major cause of the limited availability of off-patent drugs, such as methotrexate and doxorubicin. The profit motive for drug development makes it difficult to evaluate new roles for old drugs, which is important in developing countries. Drug pricing is based on effectiveness measures in clinical trials and is driven by the United States. Drug approvals based on cost-effectiveness would lead to more equitable distribution. Oncologists should be aware of the relative costs of drugs and choose cheaper alternatives when options are equal.

A strategy to maximize therapeutic benefits for all patients is to lobby the European Medicines Agency and the FDA to link approvals for new therapies in wealthy countries to agreements by drug manufacturers to provide the therapies at a much lower price to countries that cannot afford them.

### *Barriers and Challenges to Cancer Research*

Access to cancer drugs and new diagnostic procedures is critical to cancer control around the globe. Studies show that patients enrolled in clinical trials have improved care and outcomes. Participation in clinical research enables quick and smooth introduction of new, effective treatments in standard practice. According to Tanja Cufer, MD, PhD, University Clinic Golnik, Ljubljana, Slovenia, only about 3% of cancer patients worldwide are participating in clinical trials.

Last year, the ASCO International Affairs Committee conducted a web-based survey of 300 oncologists from 24 countries on challenges to clinical cancer research. Eighty oncologists responded, 41 from high income countries (HIC) and 39 from low- and middle-income countries (LMIC; Table 1). Most respondents had participated in up to 10 trials in the previous 5 years. A significantly higher percentage of oncologists from HIC versus LMIC participated in >10 clinical trials during this time. More respondents from LMIC reported it took >120 days from regulatory initiation to enrollment of the first patient.

Lack of funding was the most important obstacle and patient accrual the least important for academia-driven clinical trials