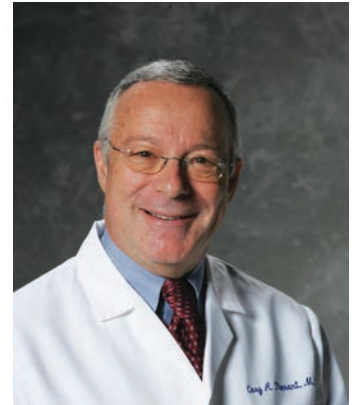


Highlights from ASCO 2018



Setting a record for attendance of more than 40,000 people, ASCO 2018 featured a virtual explosion of immunology study results—alone or in combination with chemotherapy. Amid frozen meeting halls (the air conditioning was set too low) and long lines for food and coffee, attendees logged lots of steps to attend the myriad of presentations and see posters of interest. I thought my average of 12,000 steps daily was high until another oncologist said she hit 20,000 steps. In short, ASCO 2018 offered a wealth of new data that will continue to transform clinical practice and cancer program development. Most important, implementation of the scientific advances we learned at ASCO 2018 will improve the length and quality of life of our cancer patients. Diving right in, here are my thoughts about the highlights of ASCO 2018.

Breast Cancer

Localized Disease

- In **Abstract LBA1**, J. Sparano and colleagues reported results of the long-awaited TAILORx trial. Of 10,253 patients, Oncotype DX® risk scores of 10 or less received HT. For scores of 11 to 25 (intermediate range), those patients randomized to HT had PFS and OS that were noninferior to patients who received CT plus HT. However, for patients with risk scores of 16 to 25 who were under age 50, PFS was lower for HT compared to better PFS for CT plus HT. These findings should guide care of these patients in all practice settings.
- **Abstract 504**, P. Poortmans et al. presented the results of EORTC trial 22922. Patients with stage I–III breast cancer with axillary nodal metastases or those who had central or

ACRONYM LEGEND

ABX: Antibiotic
ALL: Acute lymphocytic leukemia
ASCO: American Society of Clinical Oncology
CN: Cytoreductive nephrectomy
CR: Complete response
CT: Chemotherapy
ctDNA: Circulating tumor DNA
DFS: Disease-free survival
GA: Geriatric assessment

HIPEC: Hyperthermic intraperitoneal chemotherapy
HR: Hazard ratio
HT: Hormonal therapy
IO: Immuno-oncology
Ipi: Ipilimumab
IT: Immunotherapy
LBA: Late breaking abstract
LS: Lynch syndrome
MSI: Microsatellite instability

MTT: Matched targeted therapy
NSCLC: Non-small cell lung cancer
OS: Overall survival
PFS: Progression-free survival
PR: Partial response
RR: Response rate (CR + PR)
RT: Radiation therapy
SCLC: Small cell lung cancer
TNBC: Triple negative breast cancer

medial cancers were randomized to receive either standard care or to receive in addition internal mammary plus medial supraclavicular RT. OS at 15 years was 70.9% with standard care vs. 73.1% after internal mammary plus medial supraclavicular RT, HR 0.92, with a 3.9% reduction in breast cancer associated mortality $p=0.005$.

- H. Earl and colleagues (**Abstract 506**) reported findings from the PERSEPHONE trial in HER2-positive patients who received either 12 months or 6 months of trastuzumab. The noninferiority trial showed four-year PFS of 89.8% in the 12 month group vs. 89.4%, HR 1.07, confirming noninferiority. If patients had received a taxane-based CT, 12 months of treatment was superior to 6 months of therapy, HR 2.06.
- In **Abstract 500**, M. Gnant et al. compared patients receiving adjuvant denosumab 6 months vs. placebo (ABCSG-18 trial). Ninety-six-month DFS was 80.6% vs. 77.5% respectively, HR 0.82, with reduced contralateral cancer associated with denosumab. However, in **Abstract 501**, R. Coleman and colleagues showed in the D-CARE study that adjuvant denosumab monthly for 6 months and then every 3 months showed no difference in bone metastasis-free survival, PFS, or OS.

Advanced Disease

- **Abstract 1004**, A. Bardia et al. showed that sacituzumab govitecan (an anti-Trop 2 antibody connected to an SN38 payload) in 54 patients for third-line therapy produced 31% PR, PFS 6.8 months.
- B. Xu and colleagues (**Abstract 1003**) reported that utidelone plus capecitabine was superior to capecitabine alone in patients refractory to anthracyclines and taxanes. RR was 45% vs. 24%, and OS was 21 months vs. 15.9 months, HR 0.63.
- In **Abstract LBA1006**, J. Baselga et al. showed that in patients with a PIK3CA mutation, taselisib (PI3K inhibitor) plus fulvestrant had a higher invasive cancer PFS of 7.4 months compared to fulvestrant alone at 5.4 months, HR 0.7, and also a higher RR, 28% vs. 11.9%.

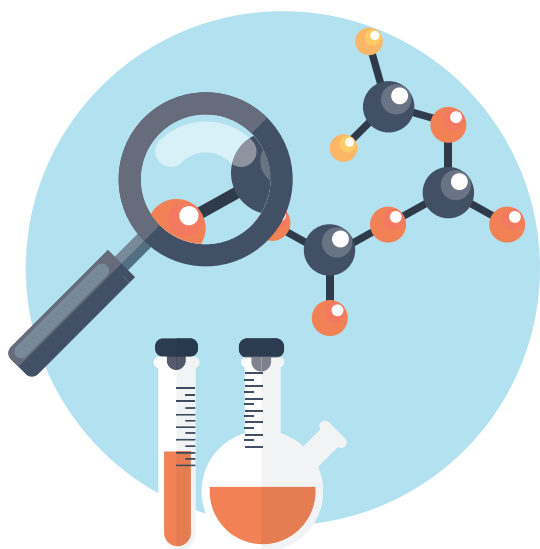
- P. Schmid and colleagues (**Abstract 1007**) studied patients with previously treated TNBC who were treated with paclitaxel plus capivasertib (AKT inhibitor) or paclitaxel alone. PFS was longer, 5.9 months vs. 4.2 months, HR 0.74; OS was much longer, 19.1 months vs. 12.6 months, HR 0.61. These findings are an important new lead in TNBC.
- **Abstract 1008**, R. Dent et al. presented on findings from the LOTUS trial in patients with previously treated TNBC treated with paclitaxel plus ipatasertib (anti-AKT) or paclitaxel alone. The combination was superior with a PFS of 6.2 months vs. 4.9 months, HR 0.6; OS was 23.1 months vs. 18.4 months, HR 0.62.
- D. Slamon and colleagues (**Abstract 1000**) reported findings from the MONALEESA-3 trial in patients with hormone receptor-positive HER2-negative metastatic breast cancer treated with ribociclib plus fulvestrant vs. fulvestrant alone. The combination was superior with a PFS of 21 months vs. 13 months, HR 0.59.
- **Abstract 1002**, P. Neven et al. reported on the MONARCH 2 trial of fulvestrant plus abemaciclib vs. fulvestrant alone (patients in pre- and peri-menopause also received a gonadotropin-releasing hormone agonist). PFS favored the combination with PFS not yet reached vs. 10.5 months, with an impressive HR of 0.45.

Colorectal Cancer

- **Abstract LBA3503**, F. Quenet et al. found that in patients with peritoneal carcinomatosis on PRODIGE 7, cytoreductive surgery plus adjuvant CT vs. cytoreductive surgery with HIPEC with oxaliplatin, OS was equal with a median of 41.2 months. One-year RFS was 46% without HIPEC and 59% with HIPEC but with increased toxicity in HIPEC patients.
- H. Hochster and colleagues (**Abstract 3504**) presented study E7208 that consisted of second-line CT with irinotecan cetuximab alone vs. CT plus ramcicirumab. PFS was superior with addition of ramcicirumab, HR 0.65, $p = 0.07$, but survival was equal.

Gastrointestinal Non-colorectal and Pancreatic Cancer

- **Abstract LBA 4001**, T. Conroy et al. presented the PRODIGE 24 trial. Patients with resected pancreatic cancer received gemcitabine (G) or mFOLFIRINOX (mF) for 6 months. PFS was 12.8 months for G and 21.6 months for mF, HR 0.59. OS was 34.8 months for G vs. 54.4 months for mF, which should be the standard of care for fit patients.
- G. Van Tienhoven and colleagues (**Abstract LBA4002**) reported in patients with borderline resectable pancreatic cancer the PREOPANC-1 trial of immediate resection (IR) followed by adjuvant CT vs. neoadjuvant RT plus CT (gemcitabine), both groups receiving adjuvant CT, that OS was 13.5 months on IR vs. 17.1 months for neoadjuvant RT + CT, HR 0.71. R0 resection was possible in 31% on IR vs. 65% on neoadjuvant RT + CT. This should be the standard of care for these patients.



- In patients with Barrett's esophagus without high-grade dysplasia (**Abstract LBA 4008**), J. J. Jankowski et al. showed that high-dose esomeprazole (40 mg) with or without aspirin (300 mg daily) was superior to low-dose esomeprazole in preventing esophageal cancer or high-grade dysplasia, $p = 0.037$. This can be an option for the standard of preventive care.
- **Abstract 4004**, P. Kunz et al. showed that in patients with pancreatic neuroendocrine cancer, temozolomide was inferior to temozolomide plus capecitabine with OS 38 months vs. not yet reached (78% at four years), HR 0.4, $p = 0.01$, indicating a practice-changing result.
- A. Zhu and colleagues (**Abstract 4003**) described the REACH 2 trial of ramcirumab vs. placebo in second-line patients with hepatoma with alpha fetoprotein >400. Treatment showed a PFS of 2.8 months with ramcirumab vs. 1.6 months with placebo and OS of 8.5 months vs. 7.3 months, respectively, HR 0.7, $p = 0.02$. This is a new drug for second-line therapy.



Genitourinary Cancer (Non-prostate)

- **Abstract LBA3**, A. Mejean et al. compared patients with stage IV renal cell cancer who received CN and then sunitinib vs. patients who had sunitinib alone. PFS was 7.2 months for CN plus sunitinib vs. 8.3 months for sunitinib alone. This was noninferior, and CN should no longer be the standard of care.
- B. Escudier and colleagues (**Abstract 4511**) reported the results of patient-reported outcomes in renal cell cancer in the IMmotion 151 trial of atezolizumab plus bevacizumab vs. sunitinib. The combination was superior with time to deterioration of quality of life, 11.3 months vs. 4.3 months, HR 0.55.

Genitourinary Cancer (Prostate)

- **Abstract LBA5009**, D. George et al. reported on the Abi Race trial. Patients with metastatic castrate-resistant prostate cancer received abiraterone. Prostate specific antigen-PFS was 16.6 months for black patients and 11.5 months for white patients. Single nucleoside polymorphisms may explain this difference.
- S. Halabi and colleagues (**Abstract LBA 5005**) compared OS in African American patients vs. Caucasian patients with metastatic prostate cancer treated with docetaxel + prednisone containing regimens. Multivariate analysis showed African American patients to have a risk of death of 0.81 compared to Caucasian patients.

Gynecologic Cancer

- **Abstract 5500**, T. Onda et al. showed that neoadjuvant CT followed by surgery was noninferior to surgery followed by adjuvant CT with an OS of 44.3 months vs. 49 months, respectively. However, optimal surgery was possible in 82% of neoadjuvant CT patients vs. only 37% in adjuvant CT patients.

Head and Neck Cancer

- **Abstract LBA6002**, A. Park et al. compared male and female survivorship with head and neck cancers. The HR for death was higher for women (1.92), possibly explained by less frequent use of intensive CT, 35% in women vs. 46% in males, and less frequent RT, 60% vs. 70%, respectively. More attention should be given to optimizing care plans for women.
- D. Zandberg and colleagues (**Abstract 6001**) compared ChemoRT with cetuximab vs. CT RT without cetuximab. Using big data from the SEER database, cetuximab CT RT was inferior in OS, HR 1.23. Therefore, non-cetuximab regimens should be used.

Leukemia, Myelodysplastic Syndrome, and Lymphoma

- **Abstract 7000**, D. Pollyea et al. studied 258 patients with relapsed refractory acute myelocytic leukemia treated with the mutant IDH1 targeted inhibitor, ivosidenib. There was a 36% CR, with OS 18.8 months.
- M. Swaminathan and colleagues (**Abstract 7001**) reported on treating 87 patients with low/intermediate-risk myelodysplastic syndrome, using low-dose decitabine or azacitidine. There was an impressive CR of 56%, with OS at four years at 68%.
- **Abstract 7002**, J. Cortes et al. described findings from the BFORE trial. In patients with chronic myelocytic leukemia, first-line bosutinib produced a 24-month major molecular response of 61% vs. 51% with imatinib ($p = 0.01$).
- F. Mahon and colleagues (**Abstract 7003**) presented the ENESTop trial of second-line nilotinib in 126 patients with CML. In patients with a molecular response MR-4.5 (major molecular response with greater than 4.5 log reduction in bcr/abl by polymerase chain reaction) and an additional one year of nilotinib and still maintaining the MR-4.5 response,

nilotinib was stopped. Sixty-five of 126 patients remained in remission. The treatment-free remission at 144 weeks was 48%, and 54 of 58 patients who were retreated regained an MR-4 or MR 4.5.

- **Abstract 8003**, M. Dimopoulos et al. reported results of the INNOVATE trial in patients with Waldenström's macroglobulinemia treated with ibrutinib plus rituximab (IR) vs. rituximab (R) alone. PFS was prolonged on IR (median not reached) vs. 20 months on R, HR 0.20, $p < 0.0001$.

Lung Cancer

- **Abstract LBA4**, G. Lopes et al. reported on KEYNOTE-042 where 1,274 patients with metastatic NSCLC PD-L1 > 1% received either pembrolizumab (P) or CT (carboplatin + paclitaxel or carboplatin + pemetrexed) in first-line treatment. For patients with tumors PD-L1 > 50%, OS was 20 months with P vs. 12.2 months with CT, HR 0.69. In addition, for patients with PD-L1 > 1%, OS was 16.7 months with P vs. 12.1 months with CT, HR 0.81. Accordingly, P is preferable to CT for patients with PD-L1 > 1% but is better with higher PD-L1 levels.
- G. Oxnard and colleagues (**Abstract LBA8501**) performed a case-control study of mutations in ctDNA in serum and also in circulating white blood cells to determine the sensitivity of ctDNA to detect lung cancer. Over 50% of mutations detected in ctDNA were also found in white blood cells, indicating clonal hematopoiesis and not lung cancer. Sensitivity in three different assays of ctDNA for lung cancer detection was 48% to 56% for stage I, II, and IIIA, compared to sensitivity of 85% to 93% for stage IIIB or IV.
- **Abstract 6500**, F. Denis et al. reported on the MOOV CARE trial in stages II-IV NSCLC or SCLC of web-based symptom review weekly and less frequent CAT scans vs. standard visit review of symptoms and more frequent CAT scans. Survival was 23.0 months vs. 14.8 months and favored the web-based surveillance, HR 0.50, $p = 0.004$.
- H. Borghaei et al. (**Abstract 9001**) presented findings from CheckMate 227. In patients with PD-L1 < 1%, PFS at one year was 26% with nivolumab plus CT vs. 14% with CT and RT alone, PFS HR 0.74.
- **Abstract 8502**, R. Osarogiabon et al. showed that a simple lymph node collection kit helped guide surgeons to resect appropriate nodes for complete staging. Surprisingly, use of the kit showed increased OS at three years of 80% vs. 73% without use of the kit, HR 0.67.

Squamous Non-small Cell

- **Abstract LBA9000**, R. Jotte et al. treated stage IV patients with CT alone (carboplatin plus either paclitaxel or nab-paclitaxel) vs. atezolizumab plus the CT. PFS was 5.6 months with CT vs. 6.3 months with IT + CT, HR 0.72. Twelve-month PFS was 12% with CT but 24.7% with IT + CT.
- L. Paz-Ares and colleagues (**Abstract 105**) described findings from KEYNOTE 407, in which patients with PD-L1 < 50% received pembrolizumab plus CT (carboplatin plus either



paclitaxel or nab-paclitaxel) or CT alone. OS for IT+CT was superior, 16 months vs. 11 months for CT, HR 0.64, $p = 0.0001$.

Non-squamous Non-small Cell

- **Abstract 9002**, M. Socinski et al. presented findings from the IMpower 150 trial. Patients received first-line CT with carboplatin + paclitaxel + bevacizumab alone or with atezolizumab. PFS favored the IT+CT arm, 8.3 months vs. 6.8 months, HR 0.59. OS also favored IT+CT, 19.2 months vs. 14.7 months, HR 0.78, $p = 0.01$. Cessation of therapy due to toxicity occurred in 34% in the IT+CT arm vs. 25% in the CT arm.
- T. Mok and colleagues (**Abstract 9004**) discussed the ARCHER 1959 trial of dacomitinib (D) vs. gefitinib (G) in patients with activating epidermal growth factor mutations. PFS favored D, 14.7 months vs. 9.2 months with G, and OS also favored D over G, 34.1 months vs. 26.8 months, HR 0.76. Central nervous system progression occurred in only 1 patient on D vs. 11 on G.
- **Abstract 9005**, A. Nakamura et al. showed that first-line gefitinib (G) plus CT (carboplatin plus pemetrexed) was superior to G alone with CT at relapse. PFS was 20.9 months vs. 11.2 months, HR 0.49, $p = 0.001$, and OS was 52.2 months vs. 38.8 months, HR 0.69, $p = 0.01$.

Small Cell

- **Abstract 8506**, H. Chung et al. described results of KEYNOTE-158 in which patients with relapsed SCLC received pembrolizumab. PD-L1-positive patients (39% of the patients) showed OS at 12 months of 53% with RR of 36%. In PD-L1-negative patients, RR was only 6%.

Multiple Myeloma

- P. Richardson and colleagues (**Abstract 8001**) reviewed the OPTIMISMM trial in patients with relapsed myeloma treated with lenalidomide, pomalidomide, bortezomib, plus

dexamethosone (PvD) vs. bortezomib plus dexamethosone. PFS was 9.5 months vs. 5.59 months, respectively, HR 0.65, $p = 0.001$.

- **Abstract 8004**, L. Costa et al. reported in patients with relapsed/refractory myeloma, there was an RR of 86% after treatment with venetoclax, carfilzomib, plus dexamethosone (VKd).
- N. Raje et al. (**Abstract 8007**) presented the results of CAR-T anti-BCMA cell therapy in protocol bb2121. Twenty-two patients had a median of eight prior therapies, and the RR was 96%, median duration of response 10.8 months.

Sarcoma

- **Abstract 11504**, F. Duffaud et al. reported on the trial of regorafenib vs. placebo in patients with second- or third-line CT for osteosarcoma. PFS was 16.4 weeks on regorafenib vs. 4.1 weeks on placebo.
- W. Tap and colleagues (**Abstract 11502**) reported findings from the ENLIVEN trial in tenosynovial giant cell tumor (pigmented villonodular synovitis). Pexidartinib showed RR at 25 weeks of 39%, compared to placebo RR of 0%. This is the first systemic treatment for this disease.
- **Abstract 11500**, M. Grounder et al. released data from the Alliance A091108 trial of sorafenib vs. placebo in patients with desmoids tumors. PFS on sorafenib was 80% at three years, compared to a median of 11.3 months on placebo, HR 0.14, $p = 0.0001$. This represents a new treatment for this tumor.
- M. Toulmonde and colleagues (**Abstract 11501**) reported results of the DESMOPAZ trial of pazopanib (P) vs. methotrexate plus vinblastine (MV) in patients with desmoids tumors. RR was 37% for P vs. 25% for MV. P is a new therapy for desmoids tumors.

Skin Melanoma

- **Abstract 9502**, J. Weber et al. reported findings on the CheckMate 238 trial, which treated stage III B, C, and D patients with either nivolumab (N) or ipilimumab (I). At 24

months, DFS was 63% for N vs. only 50% for I, HR 0.68. N is practice-changing.

Skin Non-melanoma

- **Abstract 9506**, P. Nghiem et al. described a trial of pembrolizumab in patients with advanced Merkel cell carcinoma. RR was 50%, and OS at 18 months was 68% (vs. 30% historically). This is practice-changing.

Precision Medicine

- **Abstract LBA2553**, A. Tsimberidou et al. summarized the use of molecular testing in multiple tumors. Of 3,743 patients, 1,307 (35%) had one or more mutations. Those treated with an MTT had PFS of 4.0 months vs. 2.8 months in non-MTT. OS was longer in MTT 9.3 months vs. 7.3 months in non-MTT, HR 0.72, $p < 0.001$. Among all patients tested, disease control (CR + PR + stable) associated with MTT was achieved in 243 patients (6.5%). This is a good summary of the molecular state of the art.
- A. Schwark and colleagues (**Abstract LBA1509**) tested the ability of MSI to predict LS. In 15,045 tumors, 2.2% were MSI high. Sixteen percent of MSI high patients were LS by germline testing. Although many of the patients with LS were colon or endometrial cancers, others also had MSI, including sarcoma, mesothelioma, adrenocortical cancer, and ovarian germ cell cancer. MSI should be used to screen patients with cancer for likelihood of LS.
- **Abstract 100**, K. Jhaveri et al. reported on the MATCH EAY131 subset of the 6,000-patient MATCH study. Thirty-seven HER2 overexpressing patients received T-DM1. There were three PR with parotid and scrotal cancer and 17 stable patients with colon endometrial and ovarian cancer.
- B. Li and colleagues (**Abstract 2502**) performed a basket trial of T-DM1 in 62 non-breast non-gastric cancer HER2-positive patients. There were 28% responses, with lung 50%, endometrial 24%, salivary 5 responses in 6 patients, and no colon or bladder responses.
- **Abstract 2500**, F. Merie-Bernstam et al. reported on the use of ZW25 in 42 patients with HER2-positive tumors previously treated. There was 33% PR in 27 breast cancer patients, 4 responses in 8 patients with gastric cancer, and a response in colon cancer.
- H. Iwata and colleagues (**Abstract 2501**), studied DS-8201 (trastuzumab deruxtrican) in 104 HER2-positive previously treated patients. There were 64% responders in breast cancer, 44% in gastric cancer, and 36% in other cancers. They also treated HER2-negative breast cancer patients and had 36% responders.
- **Abstract 101**, I. Krop et al. reported on the MATCH substudy of 65 patients with PIK3CA mutations treated with taselisib. There was no PR.
- A. Drilon and colleagues (**Abstract 102**) described 82 patients with Ret proto-oncogene (RET)-activated tumors due to mutations or fusions enrolled in the LIBRETTO 001 study. Patients were treated with the RET inhibitor LOXO 292.



There was 77% PR, with most having had prior therapy. The responding patients had thyroid, pancreas, and NSCLC cancers.

- **Abstract 3006**, A. Diab et al. reported on the PIVOT-02 trial of pegylated interleukin NKTR-214. They observed 64% response in melanoma, 64% in renal cell cancer, and 60% in bladder cancer.

Immunotherapy

- **Abstract 3011**, S. Fukuoka et al. correlated the gut microbiome with clinical responses to patients who received anti-PD-1 therapy. Responders (CR, PR, and stable > 6 months) had more Clostridiales and Ruminococcaceae. Species diversity was higher in responders compared to nonresponders, $p = 0.005$.
- N. Tinsley and colleagues (**Abstract 3010**) reported that use of ABX correlated with response of patients to immune checkpoint inhibitors. OS in patients without having had ABX from two weeks before to four weeks after IT was 651 days. Patients with short-term ABX from two weeks before to four weeks after IT was 317 days. Patients with longer ABX or combination ABX was only 87 days ($p = 0.009$). Avoiding ABX with IT would seem prudent.

Patient and Survivor Care

- **Abstract LBA10003**, S. Gupta et al. studied whether a GA could assist in communication about improving care. If physicians received the results of the GA, physicians subsequently had 9.5 discussions about age-related concerns vs. only 2.7 discussions if the physicians had not received GA results. Of those discussions following receipt of the GA, 1.9 discussions led to interventions to reduce patient risk or improve quality of life. Conclusion: if a practice can implement GA, it can benefit patients.



- S. Mohile (**Abstract 10003**) described a web-based GA. Of 85 invited practices, only 31 participated. Patients completing a GA had three times more physician interventions to improve symptoms and preserve function and twice as many discussions that were of high level.
- **Abstract 10000**, S. Shen et al. presented the results of SWOG S0927 where breast cancer patients with aromatase-induced arthralgias received omega-3 fatty acids 3.3 g/daily or placebo. Pain decreased more in the treatment group, -2.9 vs. -1.49 , $p = 0.02$. However, in **Abstract 10118**, L. Peppone et al. compared omega-6 fatty acids (3 g/daily) vs. omega-3 fatty acids (3.3 g/daily) in breast cancer survivors with pain. Omega-6 was marginally better, $p = 0.05$.
- J. Mao and colleagues (**Abstract 10003**) compared acupuncture with cognitive behavioral therapy for patients with breast cancer with insomnia. Cognitive behavioral therapy was superior with a change of -10.9 at 8 weeks vs -8.3 , $p = 0.007$.
- **Abstract 10007**, S. Douglas et al. compared physician vs. patient attitudes toward different goals near the end of life. Interestingly, the correlation coefficient was only 0.3. Bottom line: patients should have a better tool to be able to communicate to their physicians their preferences for quality of life vs. length of life.
- E. Soto Perez de Celis et al. (**Abstract 10009**) used three different tools to detect attitudes of older patients. Forty-four percent of patients rated goals other than survival as more important than survival, and over 50% specifically rated independent living or preservation of cognitive function as more important.
- **Abstract 10016**, C. Loprinzi et al. studied patients with CT-induced peripheral neuropathy, comparing Scrambler therapy (machine-generated scrambled nerve impulses applied around the neuropathic areas) with TENS (transcutaneous electronic nerve stimulation at wrists or ankles). Tingling was decreased 45% with Scrambler vs. 25% with TENS. Ten-week preference was 82% for Scrambler vs. 39% for TENS. These are additional supportive therapies for this challenging problem.


Health Sciences Research

- **Abstract LBA 3579**, T. Yezefski et al. compared costs of care for metastatic colorectal cancer for patients in western Washington State (WA) vs. British Columbia (BC). Although OS was the same, costs were higher in WA, \$7,883 per month, vs. BC, \$4,830 per month. Use of CT was somewhat higher in WA, 79%, vs. BC, 68%. WA patients usually received FOLFOX in first-line, whereas BC patients usually received FOLFIRI plus bevacizumab.

From Bench to Bedside

From the above highlights of ASCO 2018, my take-home ideas, which I will introduce into my practice, include the following:

- **Barrett's Esophagus**. I will consider esomeprazole with or without aspirin for chemo-prevention.

- **Breast cancer localized stage.** (1) I will use CT more selectively based on OncotypeDX; (2) I will advise RT to internal mammary and medial supraclavicular areas for selected node positive or medial tumors; and (3) I will consider reducing adjuvant trastuzumab to six months in patients receiving anthracycline-based adjuvant CT.
- **CML.** I will consider stopping second-line nilotinib in selected patients.
- **Lung cancer (NSCLC).** (1) I will always consider IT+CT for first-line therapy in selected patients; (2) I will consider dacomitinib in certain epidermal growth factor–mutated patients; and (3) I will consider web- or tablet-based symptom surveillance after CT.
- **Lung Cancer (SCLC).** I will consider pembrolizumab in selected PD-L1-positive patients.
- **Melanoma.** I will consider nivolumab as adjuvant therapy for selected stage III patients.
- **Merkel Cell cancer.** I will consider pembrolizumab therapy for stage IV patients.
- **Myelodysplastic syndrome.** For low- or intermediate-risk patients, I will consider low-dose decitabine or azacytidine.
- **Myeloma.** I will increase my use of PVD or VKd.
- **Pain control.** (1) I will consider supplemental omega-3 or omega-6 fatty acids, and (2) I will consider Scrambler therapy or TENS for CT-induced neuropathy.
- **Pancreatic adenocarcinoma.** I will consider Folfirinox as adjuvant therapy or neoadjuvant CT+RT if respectability is borderline.
- **Patient care.** I will implement a web- or tablet-based geriatric assessment in elderly patients.
- **PNET tumors.** I will consider using temozolamide plus capecitabine treatment.
- **Renal cell cancer.** (1) I will use less cytoreductive nephrectomy for stage IV patients, and (2) I will increase use of atezolizumab plus bevacizumab.
- **Waldenstrom's Macroglobulinemia.** I will consider ibrutinib plus rituximab therapy. 

To better understand the information in this article, I urge readers to see the final published manuscripts (some are already available in the *New England Journal of Medicine*, *JAMA*, *JCO*, or *Lancet Oncology*). To read the full abstracts, go to meetinglibrary.asco.org, type in the abstract number, and then search. This will bring up the published manuscript with more details.

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