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INSIDE

Anastrozole Update: Superior Clinical Efficacy

ABSTRACT & COMMENTARY

Synopsis: *An update from the ATAC trial at a median follow-up of 47 months (approximately 14 months later than the initial report from the trial) continues to demonstrate increased efficacy for anastrozole when compared with tamoxifen for the treatment of early breast cancer in postmenopausal women. Parameters included disease-free survival, time to recurrence, and incidence of cancer in the contralateral breast. The toxicity data also are favorable, with less hot flashes, vaginal bleeding, and fewer cases of endometrial cancer, thromboembolic events, and cerebrovascular accidents. However, there were more fractures and other musculoskeletal adverse events observed in the women treated with anastrozole. Although the data are very encouraging, a longer follow-up period is likely to be required before this drug will supplant tamoxifen as the treatment of choice in this clinical setting.*

Source: ATAC Trialists' Group. *Cancer*. 2003;98:1802-1810.

THE ARIMIDEX, TAMOXIFEN ALONE OR IN COMBINATION (ATAC) trial is a large-scale, international, industry-sponsored interventional, randomized study involving almost 10,000 early-stage postmenopausal breast cancer patients who were randomized to receive either anastrozole alone or in combination with tamoxifen, or tamoxifen alone. A comprehensive report in 2002 described the findings at a median follow-up of 33 months[1] and the current report updates the study, now with a median follow-up of 47 months. In the first report, it was apparent that anastrozole was superior to tamoxifen in terms of disease-free survival (DFS), time to recurrence (TTR), and incidence of contralateral breast cancer (CLBC).

DFS estimates at 4 years remained significantly more favorable (86.9% vs 84.5%, respectively) for patients receiving anastrozole compared with those receiving tamoxifen (hazard ratio [HR], 0.86; 95% confidence interval [CI], 0.76-0.99; $P = .03$). The benefit generated by anastrozole in terms of DFS was even greater in patients with hormone receptor positive tumors (HR, 0.82; 95% CI, 0.70-0.96; $P = .014$). The hazard ratio for time to recurrence also indicat-

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ed a significant benefit for patients receiving anastrozole (HR, 0.83; 95% CI, 0.71-0.96; P = .015), with additional benefit for patients with hormone receptor-positive tumors (HR, 0.78; 95% CI, 0.65-0.93; P = .007). Contralateral breast cancer incidence also occurred less frequently in the anastrozole-treated patients (odds ratio [OR], 0.56; 95% CI, 0.32-0.98; P = .042).

The updated safety analysis, performed 7 months after the first analysis (median duration of treatment, 36.9 months), also confirmed the earlier findings. Endometrial cancer, vaginal bleeding and discharge, cerebrovascular events, venous thromboembolic events, and hot flashes all occurred significantly less frequently in the anastrozole group, whereas musculoskeletal disorders and fractures continued to occur significantly less frequently in the tamoxifen group.

COMMENT BY WILLIAM B. ERSHLER, MD

This update brings us one step further in establishing a more favorable profile for anastrozole in the treatment and/or prevention of hormone receptor-positive breast cancer. The question is whether the data are sufficient to establish anastrazole as the standard of care. For this, it will probably take additional time. Although it is likely the differences observed, when compared to tamoxifen, will indicate greater efficacy (longer overall survival), inasmuch as the surrogate markers of recurrence rate and time to recurrence usually are excellent predictors of overall efficacy. Nonetheless, the study is not mature enough to conclude that the safety profile will remain stable. The safety data presented represent a median treatment time of less than 3 years. It will be recalled that it took much longer than this to recognize the association of tamoxifen with endometrial cancer. Accordingly, before becoming established as the standard approach, a look beyond 5 years of treatment will be necessary. In the meantime, the gratifying result of observing 70% fewer contralateral breast cancers has prompted the examination of anastrozole in a large cancer prevention study in the United Kingdom. The second international breast cancer intervention study (IBIS II) will involve 6000 postmenopausal women who are not taking hormone replacement therapy and are at increased risk of breast cancer because they have one or more close relatives with the disease. Cognition and bone density will be carefully monitored in that trial. ■

Reference

1. ATAC Trialists' Group. *Lancet*. 2002;359:2131-3139.

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New Approach to Cancer of the Lip Yields Excellent Results

ABSTRACT & COMMENTARY

Synopsis: *Controversy exists regarding the best approach to early epidermoid cancers of the lip. Various approaches have been advocated, including surgery with or without postoperative radiotherapy, and low-dose rate (LDR) brachytherapy. In 1999, after almost 15 years of using LDR, Guinot and colleagues in Valencia, Spain, switched to high-dose rate (HDR) brachytherapy exclusively for their patients with early lip tumors, and they found that the outcomes were equivalent. In addition, the HDR technique is quick and easy to perform.*

Source: Guinot J-L, et al. *Radiother Oncol*. 2003;69: 113-115.

BASED ON THEIR EARLIER SUCCESS WITH LDR brachytherapy for patients with early stage lip can-

cers, Guinot et al applied similar principles with an HDR system and reported their results for those patients treated from 1999 to 2002. Their all-male cohort of 39 patients with a mean age of 73 years (range, 38-90 yrs) included 38 squamous cell cancers and 1 basal cell tumor. Thirty-six lesions involved the lower lip and 3 were on the upper lip. There were 21 T1, 6 T2, and 12 T4 tumors. Four patients had clinically positive neck nodes at presentation.

Triangular plastic templates were used as needle guides for the insertion of 3-9 needles per case. The needles were inserted under local anesthesia parallel to the longitudinal dimension of the affected lip. Any air gaps were filled in with bolus material. No simulation was done. Rather, optimized dosimetry calculations were made based on an assessment of the required active length for the sources, which always encompassed the whole lip. The median active length was 6 cm (range, 4.5-7 cm). Treatment was prescribed to the 90% isodose line. Total dose was 40.5-45 Gy in 8-10 fractions b.i.d., with 45 Gy in nine 5 Gy fractions for 5 days being the most commonly used schedule. Three millimeter lead shielding was always used behind the lip to protect the underlying structures such as the gingiva.

Actuarial local control at 3 years was 88%, and actuarial disease-free survival at 3 years was 91%. Local control was statistically significantly worse in T4 lesions (74%) compared with T1-2 tumors (95%; $P <$ .05). Three of 4 patients with persistent or recurrent disease were salvaged with surgery, resulting in an ultimate local control rate of 97% (38/39). All 3 patients who received postoperative radiotherapy to the neck following dissection for positive nodes remained free of disease, while one who had RT alone to the neck recurred. Acute toxicity, primarily transient mucositis and ulceration, was similar to that seen with LDR brachytherapy, and resolved by 2 months. Chronic toxicity was limited to low-grade atrophy and minimal pain, with no long-term complications seen. Cosmesis and functional outcome were very good.

Guinot et al concluded that HDR brachytherapy yields 90-95% local control in small and intermediate lesions with very satisfying cosmesis. Implant dose homogeneity was better than with LDR brachytherapy, and there was no exposure to the staff by virtue of the remote control nature of the HDR system. Follow-up is still short, but HDR and LDR brachytherapy appear to confer equivalent results for carcinomas of the lip.

COMMENT BY EDWARD J. KAPLAN, MD

Lip cancers are typically treated either surgically or with RT. Cerezo and associates from Princess Margaret Hospital analyzed outcomes in 117 lip cancer patients treated with surgery (n = 28), external beam radiation therapy alone (n = 61), or postoperatively (n = 28), and found no significant difference in local control or survival.[1] Similarly, de Visscher and colleagues from The Netherlands compared results for 90 RT patients to 166 patients who underwent surgery, and found similar results for both groups.[2] LDR brachytherapy has also been used successfully for many years to treat lip cancers. Local control rates range from 90-95%.[3-5] To my knowledge, the paper by Guinot et al is the first report focusing solely on an HDR technique for the treatment of lip cancer.

Advantages offered by the HDR approach are quick administration of therapy for 5 weekdays, no requirement for general anesthesia, excellent dose coverage, preservation of structure and function, and lack of radiation exposure to the staff. Although follow-up is relatively short, the toxicity profile and outcomes appear to be comparable to LDR brachytherapy. Larger tumors may require additional treatment, reserving HDR brachytherapy as a boost. The potential benefits of sentinel node biopsy are being explored.[6]

References

1. Cerezo L, et al. *Radiother Oncol*. 1993;28:142-147.
2. de Visscher L, et al. *Head Neck*. 1999;21:526-530.
3. Pigneux J, et al. *Cancer*. 1979;43:1073-1077.
4. Beauvois S, et al. *Radiother Oncol*. 1994;33:195-203.
5. Tombolini V, et al. *Tumori*. 1998;84:478-482.
6. Altinyollar H, et al. *Eur J Surg Oncol*. 2002;28:72-74.

Vinorelbine-Docetaxel for Advanced Prostate Cancer: A Doublet Worth Exploring

ABSTRACT & COMMENTARY

Synopsis: *The management of advanced, hormone-resistant prostate cancer remains challenging. In a Phase II trial conducted under the auspices of the Boca Raton Comprehensive Cancer Center, 21 patients received vinorelbine (20 mg/m^2) and docetaxel (25 mg/m^2) on days 1 and 8 of a 21-day cycle. PSA levels fell in the majority of patients, and the combination was generally well tolerated. This particular combination deserves further investigation.*

Source: Koletsky AJ, et al. *Cancer J*. 2003;9:286-292.

HORMONE REFRACTORY PROSTATE CANCER HAS BEEN a challenge as effective, nontoxic therapy remains

elusive. In the current report, the combination of low-dose docetaxel (25 mg/m^2) and vinorelbine (20 mg/m^2) was investigated to examine the therapeutic synergy of these agents. The doses chosen for the trial were based upon phase I results in non-small-cell lung cancer.[1] At the selected doses, this prior experience would predict minimal toxicity and a low risk for schedule delays.

Patients with histologically confirmed hormone-refractory prostate cancer were eligible for the study. To enroll, patients needed a Karnofsky performance status of > 70 and evidence for adequate bone marrow reserve. It was a single-arm study in which all patients received vinorelbine (20 mg/m^2) followed by docetaxel (25 mg/m^2) on days 1 and 8 of a 21-day cycle. Tumor response was defined by reductions from baseline prostate-specific antigen (PSA) or bidimensionally measurable disease. Twenty-one patients were enrolled. The mean age was 76 years (range, 60-83 years) and the median PSA level was 116 ng/mL (range, 10.4-4262). The median number of courses of therapy was 7.5. Of the 19 patients who were evaluable for biochemical response, PSA reductions from baseline of > 75% were observed in 8; PSA reductions ≥ 50% to ≤ 75% were observed in 3; and < 50% were observed in 7 patients. The median PSA decrease was 60% ± 31%. Of 5 patients with measurable disease, 3 were evaluable and of these, 1 had a complete response and 2 had partial responses.

The vinorelbine/docetaxel doublet was generally well tolerated. In the first 2 cycles of therapy, 6 patients had grade 3 and 8 patients had grade 4 neutropenia, and all patients were manageable with granulocyte colony stimulating factor support. The great majority of patients were able to proceed through treatment without dose or schedule alterations.

COMMENT BY WILLIAM B. ERSHLER, MD

Prostate cancer is the most prevalent malignancy in men; and once the disease becomes refractory to hormonal manipulation, tumor-directed therapy has provided little with regard to tumor regression, quality of life, or overall survival. This cannot be entirely attributed to insensitivity to chemotherapy, because a number of drugs (including docetaxel and vinorelbine) have demonstrated single-agent activity. One clear problem is that clinical trials have proven difficult to conduct. The patients are generally older, treated in the community, and oftentimes primarily managed by urologists who, when the disease becomes hormone refractory, are just as likely to refer to hospice for supportive care as they are to a medical oncologist for chemotherapy.

The report by Koletsky and colleagues is a refreshing contribution. Although limited in number, the trial is an excellent example of the kind of research that can and should be done in the community when dealing with older patients with advanced disease. To their credit, the average age on study was 76 years and all patients had metastatic disease. The chemotherapy program was chosen astutely, and the schedule (that basically calls for weekly visits) was one that is very manageable for geriatric outpatients. Furthermore, the finding of a biochemical response in the majority of patients and a complete response in 1 of 3 with measurable disease offers further encouragement to the more detailed investigation of this particular doublet in the management of advanced prostate cancer. What is needed is a large-scale, multisite, community-based trial in which this doublet is compared with either agent alone, or best supportive care, with outcomes to include quality-of-life measures as well as tumor response rates and survival. The success of this would of course rely on collaborative arrangements with urologic oncologists, and it is encouraging to note that at least a few such studies are either underway or in the late planning stages.

Reference

1. Johnston E, et al. *Proc Am Soc Clin Oncol*. 1998;18: 476a.

Differences in Treatment and Outcome Between African-American and White Women with Endometrial Cancer

ABSTRACT & COMMENTARY

Synopsis: *African-American women with endometrial cancer are significantly less likely to undergo primary surgery and have significantly shorter survival than white women with endometrial cancer.*

Source: Randall RC, Armstrong KJ. *Clin Oncol*. 2003; 21:4200-4206.

Randall and Armstrong recently reported an interesting study in which they analyzed 1992-1998 Surveillance, Epidemiology, and End Results (SEER) data for 21,561 women with epithelial cancers of the endometrium with the objective of investigating disparities in treatment and outcomes between African-American and white women with

endometrial cancer. Sequential Cox proportional hazard models were used to determine the association between tumor characteristics (stage, grade, and histologic type), sociodemographic characteristics (age and marital status), and treatment (surgery and radiation therapy) and racial difference in mortality. The unadjusted hazard ratio (HR) for death from endometrial cancer for African-American women compared with white women was 2.57.

However, African-American women were significantly more likely to present with advanced-stage disease and have poorly differentiated tumors or tumors with an unfavorable histologic type and were significantly less likely to undergo definitive surgery at all stages of disease. Adjusting for tumor and sociodemographic characteristics lowered the HR for African-American women to 1.80. Further adjustment for the use of surgery reduced the HR to 1.51. The association between surgery and survival was stronger among white women (HR, 0.26) than among African-American women (HR, 0.44). Randall and Armstrong concluded that African-American women with endometrial cancer are significantly less likely to undergo primary surgery and have significantly shorter survival than white women with endometrial cancer. They further noted that racial differences in treatment are associated with racial differences in survival and that the association between use of surgery and survival is weaker among African-American than white women, raising the question about potential racial differences in the effectiveness of surgery.

COMMENT BY DAVID M. GERSHENSON, MD

Approximately 40,000 American women are diagnosed with endometrial cancer in the United States annually. Based on SEER data, the survival rate for African-American women with endometrial cancer was approximately 59%, compared with 86% for white women. As noted in this study, prior studies revealed that African-American women have a higher incidence of poorly differentiated tumors or tumors with unfavorable histologies. In addition, most studies indicated that, even after controlling for comorbid conditions and socioeconomic status, these differences persist. The present study focused on the relationship between treatment and survival. Randall and Armstrong found that, at all stages, African-American women were less likely to receive definitive surgery. They also point out, however, this relationship may not be causal. By the very act of performing surgery, which may reclassify apparent early stage patients with more advanced disease into a higher stage category, survival is improved.

The reasons for a lower rate of surgery in African-Americans remain somewhat elusive. Partial explanations include differences in extent of disease, access to care, or comorbid conditions. One of the problems with any study using the SEER database is that information is limited. For instance, the SEER database does not include much of the sociodemographic data or comorbidity data that would potentially provide insights into some unresolved issues. As with several other diseases and conditions, further studies will be necessary to elucidate the reasons for differences in outcome between racial/ethnic groups. Fortunately, health disparities research is of growing interest and is increasingly being funded. ■

Dr. Gershenson is Professor and Chairman, Department of Gynecology, M.D. Anderson Cancer Center, Houston, Tex.

Additional Concerning News About EPO Treatment

ABSTRACT & COMMENTARY

Synopsis: *In the current report, a disconcerting finding of a strikingly increased incidence of thrombosis in women with uterine cervical or vaginal carcinomas in whom erythropoietin was used to maintain hemoglobin levels at 12 g/dL was presented. The report was a retrospective review of nonrandomized patients treated at a single institution and accordingly runs the risk of overinterpretation. Nonetheless, the findings are quite dramatic and clearly warrant careful review and analysis by well-constructed clinical trial methodology.*

Source: Wun T, et al. *Cancer*. 2003;98:1514-1520.

Wun and colleagues from the University of California-Davis performed a retrospective, case-control study on consecutive patients with localized carcinoma of the uterine cervix or vagina who were treated with chemotherapy and radiation, examining for factors associated with the development of symptomatic venous thrombosis. Based upon the finding that patients with this malignancy who had their hemoglobin levels maintained by transfusion had improved clinical outcomes,[1] it was the practice at this institution to either transfuse or treat with recombinant

human erythropoietin at the earliest signs of anemia.

Records from 147 patients were reviewed. These represent a consecutive series of patients treated with chemo-radiotherapy for localized cervical or vaginal carcinoma (FIGO Stage IB-IVA) at that institution from 1994 to 2002. Only patients who were treated with combined, concurrent chemotherapy and radiation were included, and patients who underwent surgery as part of their therapy were not excluded from the analysis. Radiation included both external beam and intracavitary doses, and chemotherapy included cisplatin and 5-fluorouracil by continuous infusion for 4 days during weeks 1 and 5 of radiation therapy (in the majority of cases).

During the early phase of the analysis period (1994-1999), hemoglobin levels were maintained at > 11 g/dL, primarily by red cell transfusion. After 1999, recombinant human erythropoietin (rHuEPO) was routinely used whenever hemoglobin levels fell below 12 g/dL. Patients were considered to have had a symptomatic thrombotic event if 1) they presented with signs and symptoms consistent with either upper or lower extremity thrombosis; and 2) there was objective, radiographic verification of the thrombosis, usually by Doppler ultrasound.

Analysis revealed that there were no significant differences in age, disease stage, or body mass index between those women who received rHuEPO (n = 75) and those who did not (n = 72). There were 17 episodes of symptomatic thrombosis in the rHuEPO-treated patients compared to only 2 episodes among the 72 patients who did not receive rHuEPO. Thus, patients who received rHuEPO had an odds ratio (OR) of developing thrombosis of 10.3 (95% confidence interval [CI], 2.3-46.2). Multiple logistic regression revealed that only the use of rHuEPO was associated with an increased risk of thrombosis (OR, 15.3; 95% CI, 3.1-76.7).

COMMENT BY WILLIAM B. ERSHLER, MD

The news here, of course, is of great concern. However, before we make wholesale changes in the way we treat anemia in chemotherapy- and radiation-treated cancer patients, we need to take a critical look at the data presented.

First of all and most importantly, this was a retrospective, nonrandomized review from a single institution. The patient groups (those that did vs those that did not receive rHuEPO) may well reflect 2 distinct populations that were different in parameters not immediately obvious. Wun et al carefully examined those demographic features known to be associated with increased clotting (such as body mass index and age), but others certainly may exist. Patients in the rHuEPO group, many of whom (23 of 75) also received RBC transfusions, may have had more extensive or locally aggressive disease than those in the no-rHuEPO group, of whom 31 of 72 did not receive either rHuEPO or transfusion. Thus, just over half of the patients in the non-rHuEPO group had anemia, compared to 100% of those who received rHuEPO treatment. The presence of anemia associated with treatment might well indicate more advanced disease or reduced constitutional factors predisposing to thrombosis.

The occurrence of thrombosis in erythropoietin-treated patients is not a new observation. In patients with renal failure and anemia, rapid correction with rHuEPO is a known risk factor for thrombosis, and, accordingly, the package inserts for epoetin and darbepoetin both include warnings to this effect. Nonetheless, thrombotic events had been considered less common in rHuEPO-treated cancer patients, although in general, this population is known to have an increased incidence of clots. Thus, the current report is a bit of a wake-up call for medical oncologists to be aware of this untoward effect and to treat with caution. Short of findings indicating that patients with gynecological malignancies are particularly susceptible to this adverse effect of erythropoietin, which is unlikely, clinicians should extrapolate this caution to all patients treated with this growth factor. Conventional wisdom would suggest that we "start low and treat slow," not unlike what nephrologists have been doing for years. Further investigation may indicate that those at greatest risk are the patients for whom anemia is corrected rapidly. ■

Reference

1. Grogan M, et al. *Cancer*. 1999;86:1528-1536.

CT Virtual Colonoscopy to Screen for Colorectal Neoplasia in Asymptomatic Adults

ABSTRACT & COMMENTARY

Synopsis: *When analyzed using 3-dimensional methods, virtual colonoscopy achieves comparable accuracy in screening asymptomatic adults for colonic polyps as optical colonoscopy.*

Source: Pickhardt PJ, et al. *N Engl J Med.* 2003; 349:2191-2200.

PICKHARDT AND COLLEAGUES COMPARED THE PERformance of computed tomographic (CT), "virtual" colonoscopy with standard optical colonoscopy for the

detection of colorectal neoplasia in an asymptomatic population. A total of 1233 adults aged 50-79 years underwent same-day virtual colonoscopy followed immediately by optical colonoscopy. The sensitivity of virtual colonoscopy for adenomatous polyps was 93.9% for polyps ≥ 8 mm in diameter and 88.7% for those ≥ 6 mm. The sensitivity of optical colonoscopy was 92.2% and 79.6%, respectively. Also, CT identified clinically important, extra-colonic findings in 56 patients, 5 of which turned out to be cancerous. Two abdominal aortic aneurysms were found and repaired. The mean time spent by patients was 14 minutes for CT and 31 minutes for optical colonoscopy. Most patients preferred the CT colonoscopy, even though they rated it as equally uncomfortable (because the patient must introduce sufficient air to achieve pneumocolon for the CT to be readable). The only apparent drawback to virtual colonoscopy is that in practice, polyps or other significant lesions identified on screening virtual colonoscopy would require optical colonoscopy for biopsy afterward. In contrast, with optical colonoscopy, the biopsy can be done at the time of the procedure. The other limitations to the use of virtual colonoscopy are the need for dedicated training of radiologists and technologists and the lack of availability of the software systems that permit 3-dimensional analysis.

COMMENT BY SARAH L. BERGA, MD

This article grabbed my attention because I had just seen a glaring example of direct-to-consumer advertising in the form of a huge billboard along the interstate advocating virtual colonoscopy. I had not read too much about this technique in the medical literature, as most of the published debate has focused on the pros and cons of occult heme testing from stool samples vs standard sigmoidoscopy vs optical colonoscopy. Although I was not necessarily the intended consumer, the billboard worked well in that it garnered my professional attention. Interestingly, most professional organizations that make screening recommendations do not even endorse optical colonoscopy because of the cost and risk. Rather, they generally advocate sigmoidoscopy or occult heme testing. However, optical colonoscopy does have a higher sensitivity, if only because more of the colon is examined and colonic cancers are evenly distributed throughout the length of the colon. (I like to think of a sigmoidoscopy as similar to doing a screening mammogram of only 1 breast.) Since colorectal cancer is the second leading cause of cancer-related death, it is prudent to recommend some form of screening. In average-risk patients, the guidance has been to start screening at age 50 years.

Most colorectal cancers are believed to arise within benign adenomatous polyps, the removal of which markedly decreases the incidence of colorectal cancer. In the discussion of the present article, Pickhardt et al note that the number of patients who would require subsequent optical colonoscopy for removal of polyps identified on virtual colonoscopy depends on the recommendation regarding the size of the polyp that must be removed. If the cut-off is 6 mm, then 30% of patients in the present study would have required follow-up optical colonoscopy. Pickhardt et al recommend removal for polyps ≥ 8 mm, in which case only about 15% of the study population would have required optical colonoscopy. Of note, only about half of the eligible population has not undergone screening of any type. Thus, a technique that works and has high patient acceptance with low medical risk would represent a true medical advance.

The erstwhile OB/GYN who has time to do appropriate well-care counseling clearly should include a discussion of screening for colon cancer. However, to do this, one has to have both an opinion about and the time to make a recommendation. The present article is intended to help with forming an opinion. I have still not conquered the time barrier. Assuming comparable cost (a topic not covered in the article), it would appear that virtual colonoscopy has higher patient acceptance and comparable sensitivity and clearly can be recommended to interested patients older than 50. If the first optical colonoscopy is negative in an average-risk, asymptomatic individual, current recommendations suggest that the next one be done in 10 years. Given the comparable sensitivity, one assumes that a similar recommendation would hold for a negative virtual colonoscopy. ■

Dr. Berga is James Robert McCord Professor and Chair, Department of Gynecology and Obstetrics, Emory University School of Medicine, Atlanta, Ga.

CME Questions

1. **Which of the following statements about the occurrence of symptomatic thrombosis in patients with carcinoma of the uterine cervix or vagina was recently demonstrated to be true?**
   a. It was more common in patients treated with erythropoietin alone than in patients treated with blood transfusion alone.
   b. It was more common in the group of patients treated with erythropoietin with or without blood transfusion than in the group of patients who were either treated with blood transfusion alone (without erythropoietin) or who did not require treatment of anemia.

c. It was more common in patients who received high doses of erythropoietin compared to those who received lower doses.
d. It was more common in patients treated with a combination of erythropoietin and blood transfusion than in those treated with erythropoietin alone.

2. In the ATAC trial analyzed at 47 months, the data indicate that when compared to tamoxifen, anastrozole treatment of early breast cancer in postmenopausal women demonstrates superior results in all but which one of the following parameters?
a. Disease-free survival
b. Overall survival
c. Time to recurrence
d. Occurrence of cancer in the contralateral breast

3. The combination of docetaxel and vinorelbine, when used for advanced prostate cancer, was shown to produce all but which one of the following?
a. Improved overall survival when compared to historical controls
b. Reduced PSA levels in the majority of treated patients
c. A reasonable safety profile
d. A manageable schedule that resulted in minimal treatment interruptions

4. All of the following are true about HDR brachytherapy treatment of lip cancer *except*:
a. The side effect profile mirrors that of LDR brachytherapy.
b. Patients are highly likely to develop local recurrences.
c. Results are worse for T4 tumors than for smaller lesions.
d. Radiation exposure to the staff is eliminated.

5. The Guinot group treated their lip cancer patients using HDR brachytherapy doses in the range of:
a. 30-40 Gy.
b. 40-50 Gy.
c. 50-60 Gy.
d. 60-70 Gy.

6. The Guinot group treated their lip cancer patients using an HDR brachytherapy schedule that called for fractions to be given:
a. q.d.
b. b.i.d.
c. t.i.d.
d. weekly.

Answers: 1 (b); 2 (b); 3 (a); 4 (b); 5 (b); 6 (b)

In Future Issues:

Tracking the Significance of Monoclonal IgM