

1992

Oncolog, Volume 37, Issue 03, July-September 1992

Scott M. Lippman MD

The University of Texas MD Anderson Cancer Center

Mark A. Schusterman M.D.

The University of Texas MD Anderson Cancer Center

Eva Singletary MD

The University of Texas MD Anderson Cancer Center

Merrick I. Ross M.D.

The University of Texas MD Anderson Cancer Center

Daryl Ogden MS

The University of Texas MD Anderson Cancer Center

Follow this and additional works at: <https://openworks.mdanderson.org/oncolog>



Part of the [History of Science, Technology, and Medicine Commons](#), and the [Oncology Commons](#)

Recommended Citation

Lippman, Scott M. MD; Schusterman, Mark A. M.D.; Singletary, Eva MD; Ross, Merrick I. M.D.; and Ogden, Daryl MS, "Oncolog, Volume 37, Issue 03, July-September 1992" (1992). *OncoLog MD Anderson's Report to Physicians*. 39.

<https://openworks.mdanderson.org/oncolog/39>

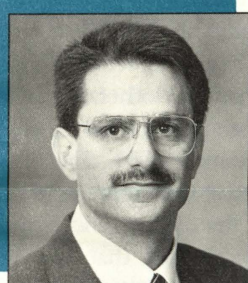
This Newsletter is brought to you for free and open access by the Research Medical Library at OpenWorks @ MD Anderson. It has been accepted for inclusion in OncoLog MD Anderson's Report to Physicians by an authorized administrator of OpenWorks @ MD Anderson. For more information, please contact rml-help@mdanderson.org.

MD Anderson Oncolog

Half of the patients respond to the experimental therapy; long-term data needed.

Retinoic acid/interferon combination shows promising response rates

Treatment Update



Scott M. Lippman is an assistant professor of medicine in the Department of Medical Oncology

If found early enough, squamous cell carcinoma (SCC) of the skin is curable: in the United States, over 90% of these cancers are successfully treated with surgery. Nevertheless, about 3,000 people die each year from the disease. Their cancers are too far advanced to attempt surgery or have metastasized to regional or distant sites. No effective treatment exists for these patients, according to Scott M. Lippman, M.D., assistant professor of medicine in the Section of Head, Neck, and Thoracic Medical Oncology of the Department of Medical Oncology at The University of Texas M. D. Anderson Cancer Center.

Lippman recalled his frustrating experience as a fellow treating a patient with this advanced cancer. (Most patients with this cancer see head and neck specialists, because about 70% to 80% of SCCs of the skin are located in the head and neck region.) Because surgical treatment is so effective for most patients, said Lippman, "very advanced disease is rare, and there was no mention of it in any of the textbooks of dermatology or medical oncology. There was not even a sentence about systemic therapy (i.e., chemotherapy). As a medical oncologist, I knew systemic therapy was necessary for this patient, but there was nothing to guide me on what regimen to use. I went through the literature and found a few case reports here and there but no real series." Lippman was thus inspired to address this problem in his research, and now this work has identified a promising start to a new therapeutic regimen not only for SCC of the skin but also for SCC of the uterine cervix.

As a fellow, Lippman had become interested in treating human cancers with retinoids, the natural and synthetic analogues of vitamin A, which contribute to normal development and differentiation of epithelial tissues. Retinoids have long been studied for their effects on cancer and are known to regulate malignant cell differentiation and proliferation. Lippman and his colleagues designed several limited studies that treated SCC of the skin with various retinoids, including 13-*cis*-

retinoic acid (13-cRA) (commonly known by one of its trade names, Accutane). He also became aware of a few similarly small anecdotal studies in which patients with SCC of the skin were treated with interferon-alpha 2a, or Roferon-A, whose principal clinical uses today are treating hairy cell leukemia and AIDS-related Kaposi's sarcoma. He was intrigued by the possibility that this serious disease could be treated with a so-called biological systemic therapy, that is, one without the extreme side effects of the cytotoxic chemotherapies. Even though these studies were small (most included only six or fewer patients), they were persuasive: 40% to 50% of the subjects responded to the treatments.

Lippman had another reason for taking notice of the therapeutic activity of the retinoids and interferon: he and his collaborators on a team headed by Waun Ki Hong, M.D., chief of the Section of Head, Neck, and Thoracic Medical Oncology, had shown that these agents also are active in head and neck cancer chemoprevention. (Hong is principal investigator of a large multiproject program grant from the National Cancer Institute to study chemoprevention of upper aerodigestive tract cancers.) In separate studies, both 13-cRA and interferon-alpha were somewhat effective in reversing premalignant conditions of the skin.

Retinoid/interferon regimen conceived

From this evidence, Lippman and Hong devised a regimen combining the two agents in advanced SCC of the skin. Laboratory studies had shown that interferon and 13-cRA have different mechanisms of action, act synergistically, and have nonoverlapping and reversible toxic effects, suggesting that any adverse effects caused by the combination would be tolerable and reversible. The retinoid's principal side effects are drying of the skin and mucous membranes; interferon-alpha's side effects include fatigue and a flu-like syndrome.

The first phase II clinical trial of the 13-cRA/interferon-alpha combination regimen at M. D. Anderson

**“The researchers knew . . . that
a totally new approach was
needed”**

• • • • •

Cancer Center was completed in 1991. Of the 28 evaluable patients with advanced SCC of the skin, 12 had partial responses and seven had complete responses, a very encouraging 68% overall response rate. None of the patients had life-threatening toxic effects, although 18 required dose reductions to relieve intolerable side effects. As expected, all of these effects were reversible.

The favorable response rates and potential for relatively safe nonsurgical tumor destruction led Lippman, Hong, and Irwin H. Krakoff, M.D., chairman of the Department of Medical Oncology, to plan further trials in other advanced SCCs, particularly those of the cervix, lung, and head and neck. Preliminary results have just recently become available for the cervical cancer study.

Cervical cancers respond to regimen

The trial in advanced cervical carcinoma was conducted in Mexico, under Krakoff's direction, in collaboration with Mario Paredes-Espinoza, M.D., of the Department of Medicine of the Hospital Civil de Guadalajara and the Instituto Jalisciense de Cancerologia. Because regular screening for cervical cancer is not as widespread in Mexico and other developing countries as it is in the United States, cervical cancer is one of the major cancer killers in these countries. (In its advanced stages, it is relatively rare in the U.S.) The disease usually goes undetected until the tumor becomes apparent by its great bulk; the standard treatment, radiotherapy, induces responses in about 40% of advanced cases, but the treatment is rarely successful in achieving remission or prolonging survival. Cytotoxic chemotherapy regimens have also been tried, both alone and combined with radiotherapy, but have not been able to improve on radiotherapy's survival rate.

Seeking to improve the standard treatment, Lippman and his group turned to the 13-cRA/interferon-alpha combination. Unlike carcinomas of the skin, however, there was very little evidence that either agent was effective in advanced cervical carcinoma. It was widely accepted that biological therapies were effective only against preinvasive or premalignant disease and small and well-differentiated tumors, not bulky tumors like advanced cervical carcinoma. The researchers knew, however, that a totally new approach was needed, and they believed that this regimen could induce responses in cervical carcinoma as it had in skin carcinoma.

Their study was the first known trial of this combination in cervical carcinoma. The researchers had hoped for a 20% total response rate, but the results far exceeded that goal: half (16) of the patients had at least a 50% reduction in tumor size (including four patients who had a complete remission). These results are provocative because they hint at the regimen's potential in this prevalent and deadly disease.

Laboratory efforts are now directed at discovering the mechanism for the regimen's effectiveness in skin and cervical cancers. The researchers also want to determine which types and locations of cancer can be most effectively treated with this regimen.

Lippman and his collaborators are looking to build on their discovery to design a more effective therapy for cervical cancer and, perhaps, for other advanced SCCs. To this end, another study of cervical cancer is already under way. John J. Kavanagh, M.D., chief of the Section of Gynecologic Medical Oncology at M. D. Anderson, a key member of the cervical cancer study team, said, "The first study showed that the 13-cRA/interferon-alpha regimen has significant clinical activity in cervical cancer. We doubt that the regimen alone will be effective enough to replace radiotherapy as the standard therapy, however. Combined treatment modalities are the next step." In the new study, the regimen is being used concomitantly with radiotherapy, and researchers have already learned that it sensitizes patients to the radiotherapy, making them more susceptible to both its therapeutic and side effects. Lippman said, "This regimen is so attractive because it has major activity, just like the cytotoxic combinations. But, unlike most cytotoxics, it can be given during radiotherapy without destroying bone marrow, enhancing and intensifying the effects without causing dangerous side effects. The next study will sequentially combine these two therapies with cytotoxic therapy. For these serious advanced cancers, such intensive and condensed therapy is where we want to go." ■

Physicians who desire additional information may write Scott M. Lippman, M.D., Department of Medical Oncology, Box 80, The University of Texas M. D. Anderson Cancer Center, 1515 Holcombe Blvd., Houston, Texas 77030, or call (713) 792-6363.

INTERVIEW

Silicone gel–filled implants: Women should have the option to choose

IN APRIL, THE FOOD AND DRUG ADMINISTRATION (FDA) MANDATED THAT SILICONE GEL–FILLED BREAST IMPLANTS BE STUDIED IN CONTROLLED CLINICAL TRIALS, LIMITING THE DEVICES' USE PRIMARILY TO BREAST RECONSTRUCTION AFTER MASTECTOMY. TESTIFYING BEFORE AN FDA ADVISORY PANEL IN NOVEMBER OF 1991 AND IN FEBRUARY OF THIS YEAR, OPPONENTS HAD CLAIMED THE IMPLANTS CAUSED AUTOIMMUNE DISORDERS. MANUFACTURERS AND MANY PHYSICIANS CONTENDED, HOWEVER, THAT SINCE TWO MILLION WOMEN HAVE THE IMPLANTS, IT IS A STATISTICAL CERTAINTY THAT A SMALL PERCENTAGE OF WOMEN WOULD, COINCIDENTALLY, ALSO HAVE OTHER, UNRELATED DISORDERS SUCH AS AUTOIMMUNE DISEASE. ALTHOUGH SUCH DISORDERS MAY INDEED BE COINCIDENTAL, FDA COMMISSIONER DR. DAVID KESSLER STATED THAT THE "BURDEN OF PROOF IS AN AFFIRMATIVE ONE, AND IT RESTS WITH THE MANUFACTURER." *ONCOLOG'S* MANAGING EDITOR INTERVIEWED THREE M. D. ANDERSON SURGEONS ABOUT THE FDA DECISION: MARK A. SCHUSTERMAN, M.D., S. EVA SINGLETARY, M.D., AND MERRICK I. ROSS, M.D. SCHUSTERMAN, A PLASTIC RECONSTRUCTIVE SURGEON, WAS A MEMBER OF A MULTISPECIALTY GROUP THAT ADVISED THE FDA. SINGLETARY, A SURGICAL ONCOLOGIST, TREATS BREAST CANCER PATIENTS, AND ROSS, ALSO A SURGICAL ONCOLOGIST WHO TREATS BREAST CANCER PATIENTS, TESTIFIED AT THE FDA HEARINGS IN WASHINGTON, D.C.

Mark A. Schusterman, M.D.

Q

What was your reaction to Kessler's statement? How do you think it addressed the problem?

A

Our feeling was fairly neutral about that. We've always kept our implant patients on a registry, so the ruling is not going to affect us, except in making a bit more paperwork that the FDA has mandated. We've always maintained that synthetic, implanted devices need to be tracked long term. For the most part, we feel that these devices are extremely safe, but any medical therapy has a calculated risk. Giving penicillin has a risk. Giving aspirin has a risk. These devices have a risk, too. The question is, what is the benefit compared with that risk? For mastectomy patients, there's no question in my mind that the benefit far outweighs any element of risk. In our registry of [silicone gel–filled implant] patients, we have over 300 patients whom we've followed for about six years, and none of these patients have had a serious problem: no implant ruptures, no serious infections. We have had some minor infections and implant losses but nothing unusual. One implant patient did have a so-called autoimmune disease, but it was very mild, was treated with steroids, and

resolved. A patient in another group had a similar syndrome, but did not have an implant. Was the one case of autoimmune disorder a background occurrence, or was there a cause-and-effect relationship? There doesn't seem to be a cause-and-effect relationship, but again, we're always concerned about any device that is implanted in someone's body, so we continue to follow these patients. The FDA mandate is welcomed. It's just good patient care.

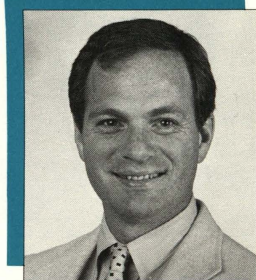
Q

Are you familiar with Dr. Bernard Patten from Baylor College of Medicine (Houston)? The press has reported that 111 women who have had breast implants are being treated by Dr. Patten for some type of autoimmune problem. What is your assessment?

A

Dr. Patten makes his diagnosis fairly liberally, and his criteria are simply any type of unusual complaint: fatigue, headaches, for example. It's very difficult for me to see how he can draw a cause-and-effect relationship with that kind of symptomatology. Current laboratory tests are very nonspecific. Some of the autoimmune tests can become weakly positive under a variety of circumstances, and the real hard evidence showing cause and effect is simply not there. We have followed our own series of patients very carefully, and we just haven't seen the same thing.

Commentary



Mark A. Schusterman, an assistant professor of plastic and reconstructive surgery, is deputy chairman of the Department of Plastic and Reconstructive Surgery

“To deny women [the] option of silicone implants because of this media blitz seemed unfair”



Q

Are there any other such data bases as yours, and what role did it play in the FDA’s decision?

A

I think its role was significant. It’s the only data that we know of, the only prospective study with a significant number of patients in it. We’re hoping to publish the data soon. It’s important for this information to be in the medical literature.

Q

In the mid-1970s, regulations changed the way new devices were studied, but because the implants were already on the market, they were exempted from the new regulations. What at that time were the known risks of silicone?

A

Silicone was thought to be an inert biomedical substance. It was—and still is—widely used throughout the biomedical industry as an implantable substance. It’s currently used in heart valves and all types of medical devices, not just plastic surgery devices. One of the fallouts from the implant controversy is that if silicone becomes a health hazard because of “political” controversy rather than scientific data, it’s going to affect all of health care. Arthritis patients, heart valve patients, and all types of patients getting prosthetic joints will be affected [since silicone is used in devices designed for these patients]. I think we need to be very careful; before we start saying something is dangerous, we should get the information in.

Q

What was your feeling when Kessler made the announcement in April? Were you relieved?

A

Yes. Overall, plastic surgeons may have felt it was a defeat, because the majority of implants are used for aesthetic augmentation, but from the reconstructive surgeon’s viewpoint, it was a victory. We felt that our job in being able to enhance the quality of life for breast cancer patients was going to be preserved, and that gave us a sense of relief.

S. Eva Singletary, M.D.

Q

What do you tell a patient about the risks of silicone implants?

A

I begin by going through all the different types of reconstruction. In describing silicone implants in particular, I tell her that we don’t know the actual risk associated with silicone and that we don’t know the frequency of autoimmune problems, either immediate or long-term. That’s definitely a concern. Seeing no autoimmune disorders in five years doesn’t mean we won’t see them 25 years. Women with implants simply haven’t been followed for that length of time. Most patients, though, even after you explain what we know and don’t know, are still willing to take that risk. Other women, however, as a consequence of all the media coverage, don’t even want to discuss implants. For them we look at the option of tissue flap reconstruction. And still other women simply don’t want to hear about any type of reconstruction. They’ve been barraged with media reports and are very frightened. A diagnosis of breast cancer is very distressing. When you add to that the controversy over implants, the situation becomes even more emotional, making it hard for patients to make a decision.

Q

Even a decision about reconstruction which doesn’t use silicone?

A

Right. Some patients, once they hear the term “reconstruction,” don’t even want to consider it. We tell them about alternatives such as saline implants and tissue flap reconstruction—we prefer the tissue flap reconstruction, but some women aren’t candidates for that. That’s why Drs. Schusterman and Ross got involved in the FDA hearing, because to deny women that option of silicone implants because of this media blitz seemed unfair. It seemed much more logical to let the patient make a choice.

Commentary



S. Eva Singletary is an assistant professor of surgery in the Department of General Surgery

“Implants can be very important to many patients in terms of overall well-being and self-image”

Q

What is the typical reaction of patients who have heard the reports but still want a silicone implant? Do they just say, “It’s important to me from an emotional standpoint, and I’ll assume the risk?”

A

Yes. They’ve more or less made up their mind how they feel about implants before we even begin the discussion. Either they’re for it or they’re totally dead set against it. Nowadays breast cancer patients are very educated. Once they get the diagnosis they get their hands on all the information, so they’ve pretty much read all the reports about the implants.

Q

How long do you think it will take for the controlled clinical trials recently mandated by the FDA to come up with some meaningful data?

A

One would have to look at the probability that there is a significant risk, because if the risk is very small, we won’t find the answer until we’re doing the procedure in very large numbers, with follow-up of 10 years or more. And that may be the case. Based on our computerized registry, we haven’t seen a problem. It’s important to do these studies, but we’re not going to have the answer anytime soon.

Q

Do you think the registry played a significant role in the FDA’s decision?

A

I think it did. Most of the testimony had been emotional appeals both by patients and by physicians, and no one had any hard data. I think that our data were very important in arguing for implants as rehabilitation. If implants are to be restricted, they should be restricted for cosmetic reasons. We don’t consider breast reconstruction after mastectomy as cosmetic; it’s part of rehabilitation. I think its being presented in that way was a major factor in lifting the moratorium.

Q

Is there anything else you’d like to add?

A

Informed choice is the most critical issue. How this was handled frightened women unnecessarily. Women could react more appropriately if they received balanced information rather than anecdotal accounts. That was just sensationalism. The situation concerned us because sensationalized accounts may have scared women from getting mammograms. We were afraid that women would say, “If I have breast cancer, and if I have to have a mastectomy, and if implants are dangerous, then I don’t have any options.” And that may make women reluctant to find out whether they have breast cancer.

—●—
Merrick I. Ross, M.D.

Q

What was your reaction to the April FDA ruling, which mandated that implants could only be used in controlled clinical trials? Do you think it was good, bad, warranted?

A

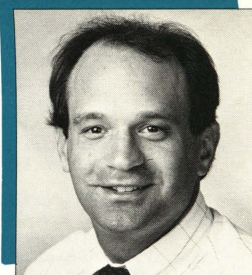
The ruling is warranted and makes good sense. It’s sound medical practice to obtain prospective information about any medical device or drug so that the true character and incidence of side effects can be determined. Unfortunately, anecdotal events concerning less-than-desired outcomes after placement of implants or isolated, serious side effects have been sensationalized in the press. The reports have been fairly one sided; we [at M. D. Anderson, on the other hand] follow a large number of patients who are thrilled at how helpful the implants have been to their cancer rehabilitation. The implants can be very important to many patients in terms of overall well-being and self-image. We are happy that we can continue to provide this important service to our breast cancer patients.

Q

You implied that the media coverage has been bad from the standpoint of emphasizing anecdotal

continued on page 7

Commentary



Merrick I. Ross, an assistant professor of surgery, is chief of the Melanoma Section in the Department of General Surgery

Cross-matching

continued from page 8

to make one unit of random-donor platelets, the patient will likely be exposed to four to six different sets of platelet antigens (from each of the individuals who donated a unit of whole blood). For each episode of thrombocytopenia—and there may be several over the course of a protocol—the patient may require numerous units of platelets and thus be subjected to what Ogden calls intense “antigenic stimulation.” The efficacy of platelet transfusion, however, depends on minimizing antibody production by minimizing the patient’s exposure to antigens. Platelet antigens vary somewhat within the human population, but not to a great extent. If a patient is rapidly exposed to all platelet antigens normally found in the population, then subsequent episodes of thrombocytopenia may be untreatable, since preexisting antibodies will target virtually any new platelets that are transfused.

Platelets from single donors are better

The rate of alloimmunization can, theoretically, be slowed by using single-donor platelets, thus exposing the patient to only one donor’s antigens. By limiting antigenic exposure, the clinician can increase the odds that the platelets from future donors (who may have a different set of antigens) will be compatible with the patient. Although Ogden said that this approach is preferable to random-donor platelets, it still leads to alloimmunization, albeit more slowly. Furthermore, there is no guarantee that the single-donor platelets will help the patient. Generally, single-donor platelets are not tested for compatibility before transfusion (an exception is human leukocyte antigen [HLA] typing, described below). The platelets’ effectiveness is determined by monitoring platelet counts after transfusion. Such delays clearly are not desirable when a patient is in critical condition. An efficient and inexpensive test, like cross-matching, that determines compatibility beforehand has clear, clinical benefits.

If donor-patient compatibility is determined before transfusion, the long-term process of alloimmunization can be further slowed, and, in the short term, the patient is more likely to demonstrate a sustained platelet increment through each acute thrombocytopenic episode, since the tested platelets have a high likelihood of being effective. (The test is about 90% predictive.) In addition, the M. D. Anderson test is more practical and less expensive than another common assay, HLA typing. (Ogden pointed out that several other tests exist but cannot be used because of the high expense or logistical difficulty of performing them. To a lesser degree, these

factors have also limited the application of HLA typing.)

In terms of predicting compatibility, HLA typing is about 85% accurate. “The two tests are about the same in accuracy,” Ogden said. “But the cross-matching test is easier to perform and less expensive. Also, other [non-HLA] platelet antigens that play a role in rejection are detected by the cross-matching test, whereas HLA typing detects only human leukocyte antigens.” HLA typing costs about \$300 per donor sample, whereas the M. D. Anderson test costs about \$15 per donor sample. “That’s what we were after,” Ogden said. “A test that could be used quickly and easily and with that kind of success rate.”

Long-term storage a major advantage

Unlike HLA typing, which requires fresh donor lymphocytes, the cross-matching test employs latex beads as long-term storage vehicles for platelet antigens. Samples used for cross-matching can be stored for up to six months by immediately processing half the sample into latex beads (which will maintain the antigens’ viability for three to four months) and by freezing the other half for future use. Although freezing destroys the platelets’ usefulness for transfusion, it preserves antigens, thus maintaining the platelets’ usefulness for the test. Three months after the sample is taken, the frozen half is thawed and processed into latex beads. With this approach, a donor’s sample could be cross-matched, as needed, at any time during the six-month period. Donors therefore need not be called in until their samples have been tested and shown to be compatible. Up to 250 donor samples per day can be screened with the cross-matching test, whereas only about 20 HLA typings can be done per day. Ogden noted that “it is not uncommon to find a patient that is compatible with only one donor out of a 100.” Thus the ability to screen 250 donors per day greatly enhances the chances that compatible donors can be identified within 24 hours for most patients. However, Ogden added that, in rare instances, compatible donors are never found.

Banking the samples, though, is no easy task. About 15 samples can be processed and banked per day, assuming, of course, that donors are available. Ogden would like to recruit 500–1000 donors and bank their samples. Doing so, Ogden believes, would meet the platelet needs of the entire patient population at M. D. Anderson, if donors would commit to three or four donations a year. From a donor’s perspective, this would be an improvement, since some donors are currently asked to donate much more frequently than that. This is so because of the inefficiency of the current method of using platelets that are not pre-tested for compatibility; many units of platelets are ineffective,

thus requiring additional transfusions. By ensuring compatibility beforehand, however, fewer units—and thus fewer donations per donor—will be needed.

Ogden would like to minimize the need for frequent donations, since he realizes that donors are making a tremendous sacrifice: the procedure takes about two hours, not to mention travel time to and from M. D. Anderson. The cross-matching test may indirectly eliminate this problem. Because the test can quickly identify multiple compatible donors, the burden of donation for a particular patient can be spread across, say, ten donors as opposed to one or two.

Mobile unit can now go to the donors

A new mobile platelet collection unit may also make things easier for donors. “We’ve always tried to accommodate our donors by keeping the transfusion clinic

open after hours and on weekends, but now with a mobile unit we can go to directly to the donors,” Ogden said. “We’d like to develop relationships with companies and institutions for periodic site visits.”

With platelet cross-matching, Ogden hopes that donors will be asked to donate fewer times, while patients still receive the benefit of a ready supply of compatible, more effective platelets. With the mobile unit and sustained, traditional recruiting efforts, Ogden is confident that this hope can be realized. ■

Physicians who desire additional information may write Daryl Ogden or Benjamin Lichtiger, M.D., Ph.D., Transfusion Medicine and Laboratory Immunology, Box 007, The University of Texas M. D. Anderson Cancer Center, 1515 Holcombe Boulevard, Houston, Texas 77030, or call (713) 792-2658.

Breast Implants

continued from page 5

information. Could coverage have been improved?

A

The media could have interviewed patients who have had no problems whatsoever and are very pleased with the results. The vast majority of patients are very satisfied with the outcome and convey how the implants have had a positive impact on their lives. A balanced report would have been more responsible journalism and more accurately reflected the situation. The preponderance of anecdotal negative reports is very misleading, suggesting that complications [capsular contracture, leakage, rupture, and autoimmune disorders] are common when in fact they are rare.

Q

What would you say to a woman who has implants and has heard all the news reports?

A

If anxiety over potential side effects is overwhelming and adversely affecting her life-style, then she should consider having the implants replaced [with saline implants] or removed. Such anxiety is a reasonable enough impetus to warrant removal, purely for emotional support. But from a medical standpoint, no data link silicone implants to autoimmune disorders or other side effects mandating removal.

Q

Would a ban on implants indirectly affect choos-

ing mastectomies as an option?

A

A lot of fear is associated with mastectomy, particularly in the absence of a viable reconstructive option. If patients feel they have no option, then denial of disease may develop just to avoid mastectomy, delaying the diagnosis. I’m also concerned that, in the absence of good evidence that implants are harmful, a strict ban infringes on a woman’s right to choose. Almost anything in medicine has some side effects. That’s why we have informed consents. Another potential concern is that a ban may result in a broadening of the indications for breast conservation surgery. We use breast-preserving approaches (a lumpectomy plus radiation therapy) in treating breast cancer whenever possible, but some patients are not appropriate candidates because of the location of the tumor, size of the tumor, or the size of their breasts. If implants had been banned, surgeons may have pushed the limits of breast conservation surgery by extending the indications just to avoid a mastectomy. Such a practice may not be oncologically safe, as it may result in an increased recurrence incidence. This could be a dangerous and realistic pitfall. ■

Physicians who desire additional information may write Drs. Schusterman, Ross, or Singletary at Boxes 62, 106, or 106, respectively, at The University of Texas M. D. Anderson Cancer Center, Division of Surgery, 1515 Holcombe Boulevard, Houston, Texas 77030, or call (713) 794-1247 (Schusterman), 792-7217 (Ross), or 792-6937 (Singletary).

MD Anderson Oncolog

The University of Texas
M. D. Anderson Cancer Center

President,
Charles A. LeMaistre, M.D.

Vice President for
Academic Affairs
James M. Bowen, Ph.D.

Associate Vice President
for Academic Affairs
Robin R. Sandefur, Ph.D.

Director, Department
of Scientific Publications
Walter J. Pagel

Editor
Kevin Flynn

Contributing Editor
Kathryn L. Hale

Production
K. Patrick

Photographs
Donald G. Kelley

Editorial Board
David M. Gershenson, M.D.
Frankie A. Holmes, M.D.
Raymond E. Meyn, Jr., Ph.D.
William Plunkett, Ph.D.
Tyvin A. Rich, M.D.
S. Eva Singletary, M.D.
Michael J. Wargovich, Ph.D.

Published quarterly by the
Department of Scientific
Publications, Division of Academic
Affairs, The University of Texas
M. D. Anderson Cancer Center,
1515 Holcombe Boulevard,
Houston, Texas 77030.

Made possible by a gift from
the late Mrs. Harry C. Wiess.

MD Anderson Oncolog
Scientific Publications, Box 234
M. D. Anderson Cancer Center
1515 Holcombe Boulevard
Houston, Texas 77030

Inside

Retinoic acid/interferon for SCC
Silicone breast implants
Platelet cross-matching

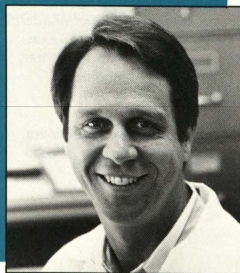
Oncolog

THE UNIVERSITY OF TEXAS
MD ANDERSON
CANCER CENTER

Nonprofit Org.
U. S. Postage
PAID
Permit No. 1
Austin, Texas

Cross-matching test helps find donors for patients in dire need of platelets

Lab to Clinic



Daryl Ogden is supervisor of the Histocompatibility Testing Laboratory

A sneeze, a cough—these are minor irritations to most of us, but not to patients who undergo aggressive chemotherapy. A potentially fatal side effect of such therapy, thrombocytopenia, makes the usually unnoticed, daily episodes of minor bleeding a cause for alarm. “In healthy people, small capillaries are breaking all the time, but hemostasis is maintained by the clotting mechanism that involves plasma protein and platelets. In thrombocytopenic patients that’s not the case. A simple cough or episode of nausea, which can be severe with some aggressive chemotherapies, can rupture capillaries. If the patient is thrombocytopenic, even such small ruptures can lead to potentially fatal internal bleeding,” said Daryl Ogden, M.S., supervisor of the Histocompatibility Testing Laboratory in the Section of Transfusion Medicine and Laboratory Immunology at The University of Texas M. D. Anderson Cancer Center.

The standard treatment for thrombocytopenia is platelet transfusion, but such transfusions can be rendered ineffective if the patient has been alloimmunized,

a condition in which the patient develops antibodies against all platelets. Because it is difficult to sustain adequate levels of platelets in alloimmunized patients, researchers have been attempting to develop strategies that not only make transfusions more effective but also slow the process of alloimmunization. Working with Benjamin Lichtiger, M.D., Ph.D, and Ayman Asfour, M.B.Ch.B, Ogden has developed a new platelet cross-matching test that provides at least one such strategy.

Alloimmunization is a manifestation of the normal immune response. In regard to platelet transfusion, however, instead of attacking foreign substances that are harmful, the immune system attacks those that are life-saving. The immune system recognizes transfused platelets as foreign and eventually develops antibodies to platelet antigens, molecules on the surface of platelets. The antibodies recognize the platelet antigens and bind to them, thus activating the immune system to destroy the transfused platelets. Alloimmunization is especially pronounced when random-donor platelets are used. Given that four to six units of whole blood are required

continued on page 6