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Evidence-based commentaries on women's reproductive health

ABSTRACT & COMMENTARY

Induction of Labor in Patients with Previous Cesarean Sections

By John C. Hobbins, MD

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Dr. Hobbins reports no financial relationships relevant to this field of study.

SYNOPSIS: A recent study involving patients being induced after two previous cesarean sections showed that they had similar rates of success, with equally low rates of neonatal and maternal morbidity, as those having induction after one previous cesarean section and even those who had outright repeat cesarean sections.

SOURCE: Miller ES, Grobman WA. Obstetric outcomes associated with induction of labor after two prior cesarean deliveries. *Am J Obstet Gynecol* 2015;213:89.e1-5.

The July issue of the *American Journal of Obstetrics and Gynecology* was loaded. Although I discussed three articles in that issue last month (on the cerebroplacental ratio), I have revisited it again to focus on an important study involving patients who had trials of labor after previous cesarean sections (TOLAC).

After a time when providers were reluctant to induce patients with previous cesarean sections, there was a more permissive approach to inductions pursuant to the American College of Obstetricians and Gynecologists' loosened stance on this. Miller et al addressed the question, "If induction may be appropriate for patients with one previous cesarean section, what are the chances of success for those with two previous cesarean sections?"[1] Data between 1999 and 2002 from 19 academic centers were reviewed and three groups were identified: 1) patients induced after one previous cesarean section, 2) patients induced with two previous cesarean sections, and 3) patients electing to have a repeat cesarean section.

There were 10,262 patients with previous cesarean sections in the analysis. Of these, 4252 patients had inductions and 152 (3.6%) of the inductions were in patients who had had two prior sections. In the whole group, 6010 (58.6%) had outright repeat cesarean sections. In those with one previous section, 2840 (69.3%) had successful vaginal births after cesarean sections (VBACs) while 99 (65.1%)

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were successful after two cesareans. Individual and composite maternal morbidities were no different between all three groups, indicating that inducing patients with one or two sections was no more risky for the mother than having an outright repeat cesarean section. Last, there were no significant differences between groups in neonatal morbidities (low Apgar scores, hypoxemia and ischemic encephalopathy, or perinatal mortality). Even after accounting for confounders, the overall chances of having a successful VBAC were no different among single and double cesarean patients.

■ COMMENTARY

In 2013, 1,284,000 deliveries were accomplished by cesarean section, accounting for a cesarean section rate of 32.7%.[2] Although this rate has actually dropped slightly, very few would say that it is just about right. As chronicled in an *OB/GYN Clinical Alert* commentary in 2010,[3] the rate of VBAC in 1990 was 19.9%, at a time when the cesarean section rate was only 22.7%. Interestingly, that figure was thought to be too high and there was an increased thrust to drop the cesarean section rate even further by hyping the option of VBAC. And it worked, with the rate of VBACs rising over the next 6 years to 28.3%. Then, as stated in an article in 2010,[4] because of "concern about patient safety and physician liability," the availability of trial of labor after cesarean section dropped down to 8.5% (2013).

Cesarean sections beget repeat cesarean sections which, in turn, beget triple operations, etc. The article from Miller et al indicates that even when patients are induced after two cesarean sections, the maternal risks and neonatal morbidities were no different than in those patients induced with one scar or, most importantly, who had outright repeat cesarean sections.[1] And two out of three patients in the study had successful VBACs under these circumstances.

The following information can be useful in counseling patients considering trial of labor after cesarean section:

1. The success rate in general is 74%, rising to 83% when a previous vaginal delivery had been accomplished.[5]
2. The risk of uterine rupture is about 0.47%,[5] but is lower in ideal candidates (a uterine scar thickness of > 2.2 mm before delivery, a birth to birth interval of > 18 months, and a two-layer closure at the time of the last section).[6]

The rewards of VBAC include: avoiding a (still) major operation with potential maternal morbidity, quicker recovery, fewer days in the hospital, a more natural experience for many, and a decrease in cost to everyone (about $7.8 billion a year is spent on cesarean sections in the United States). This study shows that even induction seems safe and, interestingly, another article in the same issue[7] indicates TOLAC to be as safe in those with cesarean scars of "unknown location" as those with known previous low transverse incisions. For years, this had been a deterrent to offering this option.

[…even when patients are induced after two cesarean sections, the maternal risks and neonatal morbidities were no different than in those patients induced with one scar or who had outright repeat cesarcan sections.]

So it seems that in the right hospital setting we should now be going back to "encouraging" appropriate candidates to have the TOLACs rather than just "offering" this option, and articles such as this should chip away at the fear of litigation that was at least partially responsible for the downward trend in VBACs. ■

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ABSTRACT & COMMENTARY

Are We on the Threshold of a New Approach to Evaluating Women with Recurrent Pregnancy Loss?

By Robert W. Rebar, MD

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Dr. Rebar reports no financial relationships relevant to this field of study.

SYNOPSIS: A small retrospective cohort study raises the possibility that advanced genetic techniques can be used to analyze the products of conception in women with recurrent pregnancy loss to identify those most likely to have treatable reasons for their miscarriages.

SOURCE: Maslow BS, et al. Single-nucleotide polymorphism microarray ploidy analysis of paraffin-embedded products of conception in recurrent pregnancy loss evaluations. *Obstet Gynecol* 2015;126:175-181.

Investigators at the University of Connecticut Health Center conducted a small retrospective cohort study including 42 women with at least two documented first-trimester losses who presented for new evaluation of recurrent pregnancy loss over a 2-year period. Paraffin-embedded products from 62 of the total of 178 losses suffered by these women were subjected to single nucleotide polymorphism (SNP) microarray ploidy analysis to identify all 24 different chromosomes (i.e., the 22 autosomes and X and Y). This technique successfully diagnosed fetal chromosome number in 44 of the 62 samples, with 43% (19/44) being euploid and 57% (25/44) being noneuploid. The most common chromosomal abnormalities were trisomy 15 (5/25) and monosomy X (4/25) and probably explain the loss of that pregnancy. Of note is that participants in this small study were significantly more likely to have an abnormality on routine screening for recurrent pregnancy loss (RPL) as recommended by the American Society for Reproductive Medicine if they had one or more euploid losses identified than those with only noneuploid losses (relative risk, 2.78; 95% confidence interval, 1.34-5.78; $P = 0.028$). This finding remained significant when adjusted for maternal age, number of losses, number of samples, and total pregnancies.

Five of the 14 women with one or more euploid analyses had abnormalities on RPL screening. Four of these had a uterine septum and one had antiphospholipid antibodies. In contrast, only one of 21 women with only noneuploid losses had any abnormality on screening, and this was the presence of uterine synechiae. One of seven women with no result on SNP microarray testing had an abnormality on screening (i.e., a submucous myoma).

Based on these findings, the authors suggest a new paradigm for evaluating women with RPL. If paraffin-embedded products of conception are available, they suggest SNP microarray testing and simultaneous evaluation of the uterine cavity. If the loss is aneuploid, no further evaluation is warranted unless there is a balanced translocation, thus justifying parental karyotyping. If euploid, modified screening with no parental karyotyping should be conducted. Only if SNP microarray testing cannot be performed is RPL screening justified.

■ COMMENTARY

Evaluation of women with RPL is frustrating for clinicians and their patients. The emotional and mental distress to these couples mandates that clinicians ensure adequate psychological counseling and support for those affected. This is made more imperative by the fact that no apparent cause is typically identified in more than half of couples presenting with RPL.[1] Yet more than 50-60% of women with unexplained RPL eventually have a future successful pregnancy depending on maternal age and parity, with or without medical consultation.[2]

All authorities agree that more than half of all early pregnancy losses are associated with sporadic chromosomal abnormalities, primarily trisomies as well as monosomies and other polyploidies, that are at least partly age related.[3,4] Although it is true that RPL may occur in those who are statistically unlucky and have multiple genetically abnormal pregnancies, authorities concur that evaluation is warranted whenever a woman has two or more failed clinical pregnancies.[5] The real question is just what tests should be included in that evaluation because aneuploidy is not usually the cause of RPL in those in whom a cause can be identified. Genetically, a balanced translocation in one of the parents is a cause that must be excluded.

In an opinion published in 2012, the Practice Committee of the American Society for Reproductive Medicine recommended that evaluation of RPL could proceed after two consecutive pregnancy losses.[1] The Practice Committee further suggested that screening might include:

1. Assessment of the uterine cavity by sonohysterogram, hysterosalpingogram, and/or hysteroscopy.
2. Screening for lupus anticoagulant, anticardiolipin

antibodies, and anti-ß2 glycoprotein I.
3. Screening for thyroid or prolactin abnormalities.
4. Peripheral karyotypic analysis of the parents.

Lastly, the Committee noted that karyotypic analysis of the products of conception might be useful, but noted that "clinical genetic testing remains rudimentary and rarely includes molecular studies, which show promise in helping to elucidate mechanisms for RPL."[1]

The authors of this small study suggest that there is no need to proceed with expensive karyotypic testing of the parents if SNP microarray testing of the products of conceptions reveals any genetic abnormality save for a balanced translocation. The authors of this study also point out that fresh tissue is not needed to perform the analysis, but rather the DNA can be extracted from chorionic villi embedded in paraffin blocks and identified by examining the stained sections made from the blocks.

While SNP microarray analysis was used in this study, other molecular genetic techniques, such as comparative genomic hybridization (CGH) array analysis, might be utilized as well, even though CGH analysis alone cannot identify maternal cell contamination.[6] As these techniques (and others) become more available, simpler to perform, and less costly, then the evaluation scheme suggested by the authors becomes more and more feasible. At present, even the authors point out that the cost of SNP microarray testing alone is more expensive than all of the tests currently recommended for the evaluation of RPL.

This small study, like so many others, identified uterine anomalies in several of the women with RPL, with uterine septa being most common by far. Several retrospective studies have documented that a uterine septum is found more commonly among women with early pregnancy losses. In one of the larger studies, the incidence of a history of first trimester loss was 41.1% in 689 women with a septate uterus diagnosed on screening 3-D ultrasound in an infertility clinic compared to 12.1% in the control of more than 15,000 women in the general pregnant population.[7] Meta-analyses of the effects of repair of the septum indicate that the incidence of miscarriage falls dramatically after the septum is incised or resected hysteroscopically.[8]

There is no question that no changes in the current recommendations regarding evaluation of RPL are warranted on the basis of such a small retrospective study. However, this thought-provoking study should give us pause and cause us to ask patients to place products of conception from any losses in water in the refrigerator and bring them to us so that they may be embedded in paraffin. Should the patient later be diagnosed with RPL, the paraffin blocks can be retrieved and analyzed. In the future, we may be better able to provide couples with RPL with explanations for their losses. Even if we are unable to increase the percentage who ultimately take home babies, such information will provide comfort and closure to those with lingering questions. ■

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ABSTRACT & COMMENTARY

Concomitant Hysteroscopic Sterilization and Endometrial Ablation: What Are the Risks?

By Rebecca H. Allen, MD, MPH

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Dr. Allen reports she is a Nexplanon trainer for Merck, a Liletta trainer for Actavis, and on the advisory board for Bayer, Actavis, and Vermillion.

SYNOPSIS: In this retrospective cohort study, women who underwent concomitant hysteroscopic sterilization and endometrial ablation procedures were more likely to have inadequate 3-month hysterosalpingram testing to confirm tubal occlusion.

SOURCE: Hopkins MR, et al. Hysterosalpingography after radiofrequency endometrial ablation and hysteroscopic sterilization as a concomitant procedure. *Obstet Gynecol* 2015;126:628-634.

This single-center, retrospective, cohort study compared women who underwent concomitant radiofrequency endometrial ablation (Novasure) and hysteroscopic tubal occlusion (Essure) to women who underwent hysteroscopic tubal occlusion alone. The primary outcome of the study was the frequency of the inability to rely on the microinserts for contraception based on hysterosalpingogram (HSG) interpretation using manufacturers' guidelines. Secondary outcomes included the degree of intrauterine synechiae present on HSG. Included women were seeking treatment for heavy menstrual bleeding and sterilization. Exclusion criteria included pregnancy, postmenopausal bleeding, undiagnosed uterine bleeding, large submucal leiomyoma, and known tubal anomaly. Women underwent HSG testing at 3 months and again at 6 months if the first exam was unsatisfactory. The HSGs were interpreted by two blinded reviewers, a radiologist, and a gynecologist. Clinical data abstracted from the medical record included basic demographic information, prior cesarean delivery, need for subsequent hysterectomy, and postprocedure pregnancy.

A total of 94 women underwent combined procedures between January 2003 and June 2011. These women were compared to 92 randomly selected subjects who underwent sterilization only during that time period. HSGs were not completed in 14 of 92 (15.2%) women in the sterilization-only group compared with 20 of 94 (21.3%) women in the combined group ($P = 0.03$). This was mostly due to patient non-adherence to the protocol; however, two women in the combined group had failed HSG attempts (one due to cervical stenosis and one due to pain). This resulted in a final study cohort of 76 patients in the sterilization-only group and 71 in the combined group. The combined group had 13 of 71 (18.3%; 95% confidence interval [CI], 10.1%-29.3%) HSGs interpreted as inadequate for the patient to rely on the device for sterilization compared with 5 of 76 (6.6%; 95% CI, 2.2%-14.7%) in the sterilization-only group. Of the seven women who returned for indicated 6-month HSGs, the two women from the sterilization-only group achieved adequacy and tubal occlusion, while the five women in the combined group did not achieve adequacy, three because of persistently patent tubes and two because of intrauterine synechiae. Including all completed HSGs, women in the combined group were five times more likely to have an unsatisfactory HSG compared to women in the sterilization-only group (odds ratio, 5.45; 95% CI, 1.48-20). Overall, the rate of intrauterine synechaie was higher in the combined group (80%) compared to the sterilization-only group ($P = 0.001$).

■ COMMENTARY

The FDA requires HSG testing 3 months after hysteroscopic sterilization to document device location and tubal occlusion before relying on the microinserts for contraception. The concern regarding concomitant hysteroscopic sterilization and endometrial ablation procedures stems from the possibility that the HSG confirmation test performed to document tubal occlusion will be suboptimal due to intrauterine scarring. In other words, the dye used in the HSG may not be able to fill the entire uterine cavity and reach the cornua and fallopian tubes. This concern has led the FDA and the American College of Obstetricians and Gynecologists (ACOG) to warn against combined procedures.[1,2] Nevertheless, there may be some circumstances where a joint procedure would benefit the patient.[3]

This group of authors reports on their experience interpreting the HSGs of patients who have had combined procedures with an appropriate control group of women who underwent sterilization only. Their technique for combined procedures involved a suction curettage to clean out the uterine cavity, the radiofrequency endometrial ablation, and finally the microinsert placement. They found that almost 20% of women in the combined procedure group did not have an adequate HSG test compared with 7% in the sterilization-only group. Most of the inadequate tests were due to lack of fill of the uterine cavity due to synechaie. The strengths of the study include a blinded assessment of the HSG and a large number of procedures to evaluate. Weaknesses include utilizing stored rather than real-time HSG images for evaluation.

So what is the problem with inadequate HSG tests after hysteroscopic sterilization, especially if an endometrial ablation was performed as well? The chance of pregnancy after endometrial ablation exists, but is low (0.7-1.6%). Nevertheless, these pregnancies tend to be high risk and complicated by placental abnormalities.[4] Therefore, contraception is still recommended after endometrial ablation. Performing the hysteroscopic sterilization with the endometrial ablation should provide that contraception, but in some cases the confirmation test cannot be performed. Therefore, the patient may have to be told that she is likely protected against pregnancy but the certainty is not 100% and that combining the procedures is off-label. This type of counseling should be performed before doing the procedures together so that the woman understands the potential issues with HSG interpretation afterwards.

But will this point be moot shortly? The company that manufactures Essure has just received approval from the FDA to remove the HSG requirement and replace it with pelvic ultrasound for straightforward Essure procedures.[5] This is what is commonly done in Europe, where tubal occlusion is presumed if the microinserts are seen in the appropriate location in the cornua. Given that non-compliance with the 3 month HSG approaches 20% in some populations, as in this study, the option of a more convenient and less painful pelvic ultrasound might improve this rate of follow-up.[6] Let's not forget, however, that the levonorgestrel IUD provides both excellent treatment of heavy menstrual bleeding and contraception and is a viable and simple alternative to sterilization + ablation. In addition, stay tuned for the outcome of the FDA expert panel review on the safety of Essure in response to patient complaints of chronic pain, fatigue, depression, and headaches after device placement. Although Essure will not be removed from the market, Bayer may be required to conduct further studies on the device. ■

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SPECIAL FEATURE

Ultrasound for Dense Breasts — Is It Worth the Cost?

By Jeffrey T. Jensen, MD, MPH

SYNOPSIS: A cost-effectiveness model found that supplemental ultrasound screening after a negative mammogram for women with dense breasts substantially increases costs without yielding significant benefit.

SOURCE: Sprague BL, et al. Benefits, harms, and cost-effectiveness of supplemental ultrasonography screening for women with dense breasts. *Ann Intern Med* 2015;162:157-166.

Since mammographic breast density can affect the performance of screening mammography, and is also an independent risk factor for breast cancer, ultrasound is commonly recommended as a secondary screening test. Since little is known about the effectiveness of ultrasound as a secondary screen, the authors used data from the Surveillance, Epidemiology, and End Results (SEER) Program and Breast Cancer Surveillance Consortium to evaluate the benefits, harms, and cost effectiveness of supplemental ultrasonography screening for women with dense breasts. Three independent Cancer Intervention and Surveillance Modeling Network breast cancer models were used. The models simulated life histories of women who were at risk for breast cancer, had screening, were treated for breast cancer diagnosed by screening or clinical detection, and were at risk for dying of breast cancer and other causes. Although the models had independent approaches and structures, they approximately replicated U.S. breast cancer incidence and mortality trends and used common inputs, including incidence in the absence of screening, mammography performance, treatment effectiveness, and competing causes of death. The cost analyses assumed a federal payer perspective. The performance of screening ultrasound was assumed to be 55% sensitive and 94% specific. The cost of ultrasound was conservatively estimated at $100. Models estimated breast cancer mortality rates, life-years, quality adjusted life-years (QALYs), false-positive examination results, and costs across the lifetimes of each simulated woman beginning at age 40 years. Within-model cost-effectiveness ratios were calculated for mammography-alone vs mammography with follow-up ultrasound.

Results of these analyses showed that for women aged 50 to 74 years with heterogeneously or extremely dense breasts, supplemental ultrasonography screening after a negative mammogram result averted 0.36 additional breast cancer deaths (range across models, 0.14 to 0.75), gained 1.7 QALYs (range, 0.9 to 4.7), and resulted in 354 biopsy recommendations for false-positive ultrasonography result (range, 345 to 421) per 1000 women with dense breasts compared with biennial screening by mammography alone. The cost-effectiveness ratio was $325,000 (range, $112,000 to $766,000) per QALY gained. Restricting the analyses to only those women with extremely dense breasts reduced the cost to $246,000 (range, $74,000 to $535,000) per QALY gained. The authors performed sensitivity analyses that demonstrated that the conclusions were not sensitive to ultrasonography performance characteristics, screening frequency (annual vs biennial), or starting age.

The authors concluded that supplemental ultrasonography screening for women with dense breasts would substantially increase costs while producing relatively small benefits.

■ COMMENTARY

Why has women's health care become such a topic of legislative interference? Although we have become used to legislation affecting reproductive health issues, a number of advocacy groups have lobbied to increase access to medical procedures. One area of specific interest has been health care screening services for women, in particular breast cancer screening. I am a strong supporter of universal health care access and public insurance. However, we need to consider carefully the menu of services offered since resources will always be limited. To provide the greatest good to the greatest number, we need to rely on careful evidence of comparative effectiveness. We all contribute to health care costs and value as providers and consumers. There is no such thing as someone else's money. Through taxes, our health insurance premiums, and the cost of services we

purchase, we collectively pay the ever-increasing cost of health care. Therefore, we need to make careful evidence-based choices.

Consider family planning services. For every dollar spent on contraceptive services (including the expensive LARC methods), we save $4-5 on other direct health care expenditures.[1] That is the major reason that contraceptive care features prominently in the Affordable Care Act. Yet despite the evidence, legislative and judicial forces have conspired to weaken the intent of universal contraceptive coverage. We need to fight back on this one.

Interference by advocacy groups in health care is often based more on emotional hot button issues rather than fact. Consider the case for breast cancer screening. One source of concern about mammography is that the sensitivity is affected by breast density. This has led advocates to lobby for laws that require notification of patients with dense breasts about this concern along with a recommendation for a screening ultrasound. These laws have passed in 24 states as of July 2015, with 9 more states considering the legislation (http://www.diagnosticimaging.com/breast-imaging/breast-density-notification-laws-state-interactive-map). But is this good for women?

Until the study by Sprague et al, there has been no formal evaluation of the practice of screening ultrasound in this population. We do know that the U.S. Preventive Services Task Force and others have issued evidence-based guidelines for screening practices that question the frequency of mammogram screening.[2,3] I have previously reported that the results from several studies[4-6] suggest that screening mammography also results in widespread overdiagnosis of breast cancer. Overdiagnosis is a true positive result of screening that fails to result in a net benefit to the patient. In the case of breast cancer overdiagnosis, the possibility of harm is real when one considers mastectomy, chemotherapy, and out-of-pocket treatment costs. This is in addition to the false-positive screens that result in additional unnecessary worry and follow-up interventions.[7]

The argument of advocates (and many radiologists) is that since dense breasts are hard to image, follow-up imaging will improve sensitivity, detect more cancers, and save lives. However, the evidence previously reviewed strongly suggests that overdiagnosis of breast cancer may in fact be harming women. Therefore, it makes sense to critically evaluate the result of adding ultrasound to the screening paradigm.

Sprague et al used strong methodology to model the effects of adding a screening ultrasound after a normal mammogram test in women with dense breasts. They found consistent results using three separate models, and the conclusions were robust and unchanged in a sensitivity analysis. The key conclusion of minimal benefit and high cost is best summarized by looking at the effect on women aged 50-74 with extremely dense breasts. In this group, use of supplemental screening ultrasonography averted 0.30 additional breast cancer deaths (range, 0.14 to 0.75) and produced 1.1 additional QALYs per 1000 women. This median 1.1 QALYs gained per 1000 women is equal to only 9.6 hours per woman! And, this marginal gain comes at a cost of 189 biopsies recommended after a false-positive

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The purpose, function, and nonprofit status of this organization and the exempt status for federal income tax purposes:
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☐ Has Changed During Preceding 12 Months *(Publisher must submit explanation of change with this statement)*

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13. Publication Title: OB/GYN Clinical Alert			14. Issue Date for Circulation Data Below: September 2015	
15.	Extent and Nature of Circulation		Average No. Copies Each Issue During Preceding 12 Months	No. Copies of Single Issue Published Nearest to Filing Date
a.	Total Number of Copies *(Net press run)*		217	198
b. Paid and/or Requested Circulation	(1)	Paid/Requested Outside-County Mail Subscriptions Stated on Form 3541. *(Include advertiser's proof and exchange copies)*	169	159
	(2)	Paid In-County Subscriptions Stated on Form 3541 *(Include advertiser's proof and exchange copies)*	0	0
	(3)	Sales Through Dealers and Carriers, Street Vendors, Counter Sales, and Other Non-USPS Paid Distribution	16	14
	(4)	Other Classes Mailed Through the USPS	11	4
c.	Total Paid and/or Requested Circulation *(Sum of 15b. (1), (2),(3),and (4))*		196	177
d. Free Distribution by Mail *(Samples, complimentary, and other free)*	(1)	Outside-County as Stated on Form 3541	10	11
	(2)	In-County as Stated on Form 3541	0	0
	(3)	Other Classes Mailed Through the USPS	0	0
e.	Free Distribution Outside the Mail *(Carriers or other means)*		5	5
f.	Total Free Distribution *(Sum of 15d. and 15e.)*		15	16
g.	Total Distribution *(Sum of 15c. and 15f)*		211	193
h.	Copies not Distributed		6	5
i.	Total *(Sum of 15g. and h.)*		217	198
j.	Percent Paid and/or Requested Circulation *(15c. divided by 15g. times 100)*		93%	92%

16. Publication of Statement of Ownership
☑ Publication required. Will be printed in the November 2015 issue of this publication. ☐ Publication not required.

17. Signature and Title of Editor, Publisher, Business Manager, or Owner: *David R. Fournier* Publisher & CEO — Date: 09/10/2015

I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on the form may be subject to criminal sanctions (including fines and imprisonment) and/or civil sanctions (including civil penalties).

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1. Complete and file one copy of this form with your postmaster annually on or before October 1. Keep a copy of the completed form for your records.
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5. If the publication had Periodicals authorization as a general or requester publication, this Statement of Ownership, Management, and Circulation must be published; it must be printed in any issue in October or, if the publication is not published during October, the first issue printed after October.
6. In item 16, indicate the date of the issue in which this Statement of Ownership will be published.
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PS Form **3526,** October 1999 *(Reverse)*

ultrasonography result and a cost of $287,000 for the 1000 women (or $287 per woman). If we expand this to include women with heterogeneously dense breasts, only an additional 0.06 additional breast cancer deaths are averted, but the total cost increases to $560,000 per 1000 women. Consider too that this cost estimate is likely low, as a federal payer perspective was used, and the estimate for breast ultrasound was a conservative $100.

As clinicians, we have to think of what is best for the patient in front of us, and we are taught not to think of dollars. But could this money be better spent on improved screening approaches? I am not convinced that imaging is the answer. Remember when diagnosis of fetal aneuploidy through a maternal blood test was a pipe dream? More research is needed. Also, we need to consider the emotional impact of false-positive screening results, and the impact of true positive tests that may in fact be overdiagnosis. To be fair, many women are willing to accept the risks of screening for the potential benefit. Our job is to provide a good discussion of the trade-off. ■

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CME QUESTIONS

1. **Which of the following does not fit the data presented in the featured study regarding induction in patients having had two previous cesarean sections?**
   a. They had similar success rates for VBAC as those with one previous section.
   b. They had similar success rates to those having repeat cesarean sections.
   c. They had higher rates of neonatal morbidity as those with repeat sections.
   d. They had similar rates of maternal morbidity as those with one previous cesarean section.

2. **What is the most common cause of first trimester pregnancy loss?**
   a. Anti-phospholipid syndrome
   b. Aneuploidy
   c. Balance translocation
   d. Hypothyroidism
   e. Uterine anomalies

3. **In the study regarding hysterosalpingography after concomitant hysteroscopic sterilization and endometrial ablation compared to sterilization alone, what proportion of tests were inadequate in the combined group?**
   a. 7%
   b. 10%
   c. 20%
   d. 30%

4. **What is the net impact of adding screening ultrasound after a negative mammogram for women ages 50-74 years with extremely dense breasts?**
   a. An increase in quality adjusted life of < 10 hours
   b. A reduction in the number of unnecessary biopsies
   c. A decrease in follow up mammograms at 6 months
   d. An increase in the diagnosis of stage 2 breast cancer

[IN FUTURE ISSUES]

Should We Remove Every Woman's Fallopian Tubes?