Although the numbers are too small to make a definitive statement, it must be acknowledged that the sequelae of subcutaneous leakage of chemotherapy around an implanted IP port can be serious, typically resulting in significant local scarring and pain and precluding continued use of the port.

If current reimbursement patterns continue, these data suggest that patients who were previously treated in oncologists' offices or clinics may need to go to their local community hospitals for chemotherapy. The differences in these venues may be particularly apparent with the administration of complex and relatively uncommon treatments like IP chemotherapy and may result in an actual decline in outcome. If fewer patients complete all prescribed cycles of treatment, the proven survival advantage of IP therapy may not be achieved. Ironically, the golden age of oncology care for physicians, which arose based on financial reimbursement, may also represent a lost golden age of quality of care from the patient perspective. To avoid this, hospitals must commit the necessary resources to ensure that outcome in women with ovarian cancer (and all other malignancies) is not compromised. These potential issues should be considered by all parties involved in the current health care reform debate as well.

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Commentary: When It Comes to Chemotherapy, Location Matters

By Michael N. Neuss, MD, and Teri Guidi, MBA, FAA, MA

It has long been a maxim in the real estate world that the three most important determinants of a property's value are "location, location, location." As doctors, we have thought that it matters much less where our patients get their care, assuming that what happens is determined only by our orders and intentions coupled with the patient's cooperation and motivation. Because of this, oncologists have been fairly sanguine about where a certain treatment is delivered, whether the location is chosen by a payer, the patient, or the oncologist. In these days of diminishing profit margins, both payers and

physicians have been instructing patients to go one place or another on the basis of reimbursement level. In what may not be an ideal alternative, patients with little or no insurance have often been sent to hospital outpatient areas, with the result that the hospital absorbs any shortfall on the expense of buying the drugs and providing the services.

This habit is understandable. Though we all say that we want to provide our patients with the best care, we also need to be responsible to our employees, institutional partners, and (of course) ourselves. We can't afford to build our organizations

around procedures that cost more to provide than what we are paid. To cite another business maxim, one cannot lose on every transaction and make up for it in volume.

In addition, it is difficult and expensive to provide intraperitoneal (IP) therapy. The logistical challenges of lengthy, complex, and dangerous treatments discourage doctors from providing IP therapy even when it should be given. Though it is not easy to estimate exactly how many patients should receive IP therapy, evidence-based guidelines, including those from National Comprehensive Cancer Center, recommend this treatment as appropriate for patients with stages II and III ovarian cancer who have undergone optimal surgical debulking.¹ Though it is possible that everyone who might benefit from IP treatment is getting it, it would be difficult to prove that this treatment is administered to every single patient who should get it.

The report by Robinson and Beyer² is important because it begins to look at the differences in what happens as patients are treated in different venues. The differences are certainly not trivial.

The first measure of success is simply getting patients through all six of the prescribed cycles of IP treatment. In the original publication describing the regimen,³ it was reported that only 42% of the 205 patients assigned to IP therapy completed treatment. In the Robinson and Beyer report,² 79% of those treated in the office and 48% of the hospital outpatient group received all planned treatment. In addition, though the death rate during this therapy is notable, the observed death rate of three of 150 patients is comparable to a previously published rate of five of 214.³ A mortality rate of less than 3% seems acceptable, but none of us would happily board a plane with a 3% chance of crashing; it is understandable that patients are reluctant to always take the recommended course of treatment.

Outpatient paclitaxel infusion over 24 hours is possible, whether given in the institutional or independent clinic, but the regimen as widely used usually involves a 3-hour infusion of paclitaxel, not the 24-hour infusion described by Armstrong et al.³ (Robinson and Beyer² simply say the paclitaxel is given intravenously the first day and do not specify the duration of infusion, though their dosing implies a 24-hour infusion.)

Robinson and Beyer² note that because of changing and relatively inadequate reimbursement for some patients, they could not afford to provide this treatment to all patients in their office and therefore elected to send everyone for whom IP treatment was appropriate to the hospital. However, a comparison of the reimbursement for administering this regimen in a doctor's office versus a hospital outpatient setting, as shown in Table 1, demonstrates that the Medicare payment is quite similar across settings. In other words, although the physicians felt that they could not break even on average, their actions in effect asked the hospitals to do what they would not. Though one might argue that many hospitals benefit from 340B pricing or other drug acquisition discounts, and that a few are even excluded from the outpatient prospective payment system and can therefore actually profit where others find significant reim-

Table 1. Comparison of Intraperitoneal Chemotherapy Medicare Reimbursement in Physician Office and Hospital Outpatient Settings

Item	Hospital Outpatient Reimbursement	Physician Office Reimbursement
Drug	\$520	\$898
Administration	\$959	\$975
Total	\$1,479	\$1,873

bursement shortfalls, overall, most hospitals don't benefit from these opportunities. In addition, no one would argue that most independent practices provide 24-hour on-site care at the level of Joint Commission standards. Further, at least in the author's (M.N.) practice, patients treated at hospitals have access to a variety of ancillary care givers, including social workers, dietitians, physical and occupational therapists, and on-site clergy. They are even provided a hot meal. Despite the widespread impression that this is all covered by "facility charges" these simply are not part of the usual accepted reimbursement for traditional Medicare patients. More important, despite the impression that these services improve patient compliance and experience, the lower completion rate of patients treated at hospitals raises many questions. First on this list is why the completion rate is so much lower despite all the ancillary services, particularly as the lower rates appear to be due to patients choosing to stop treatment and not because of treatment complications. The cost of more frequent relapse and higher death rate clearly need to be considered in the evaluation of the differences that result from changing treatment location.

The fact that overall reimbursement is less in the hospital outpatient setting is understandable on the basis of the rules for these payments. First, chemotherapy is bundled in the hospital setting, and no individual drug charge less than \$75 is reimbursed because it is assumed to be covered in the administration fees. Second, the drugs are generally reimbursed at a lower rate in the outpatient setting, with the rate for office reimbursement being 106% of average sales price and the hospital rate being 104%. Finally, in hospital outpatient settings, despite a widely held opinion to the contrary, there is no global facility surcharge when patients are seen by physicians elsewhere and have treatments covered by bundled payments

Notably, in both venues, there is no payment for planning the treatment or discussing its relative risks and benefits with patients, beyond the visit charges associated with the patient coming in for treatment. Nor is there reimbursement for the effort of creating a summary of the patient experience and a survivorship care plan at the end of a planned course of therapy, as many oncologists now acknowledge as being necessary.⁴ In addition, there is little recognition of the complexity of training for nurses who safely administer these complicated treatments, or of the managers who maintain supplies, staffing, and schedules for patients to receive therapy.

Yet it also seems clear, on the basis of the report by Robinson and Beyer,² that patient experience is better in circumstances where physicians have greater input and control of care, that is,

in their offices. If better and more efficient care is the goal, this type of study is critical to understanding aspects of both delivery and the cost of providing care. Robinson and Beyer are to be congratulated for reporting on this difficult but important area.

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