

## Why Academic Divisions of Hematology/Oncology Are in Trouble and Some Suggestions for Resolution

By Thomas J. Smith, John Girtman, and Jerry Riggins

**Purpose:** Academic divisions of hematology/oncology seem to have difficulty recruiting and retaining excellent productive clinicians. A major reason for this is that salaries do not compete with the private sector for similar work.

**Methods:** We reviewed divisional finances productivity, and experiences from faculty members leaving.

**Results:** The academic salaries are approximately one third of practice because the chemotherapy concession has been given to the academic hospital. In addition, there may be substantial problems in under-billing, lack of attention to detail in billing, and poor collection practices.

**Conclusion:** Academic practice still has much to offer, including opportunities for research and multidisciplinary team management, although the differences may narrow over the coming years. Attention to detail in the billing, collection for work performed, and increasing academic salaries to levels nearer to private practice are necessary components of the solution to recruit and retain quality productive clinicians.

*J Clin Oncol* 19:260-264. © 2001 by American Society of Clinical Oncology.

### MIGRATION OF HEMATOLOGISTS/ONCOLOGISTS FROM ACADEMICS TO PRIVATE PRACTICE

IT HAS BEEN an interesting 2 years here at Medical College of Virginia campus of Virginia Commonwealth University (MCV-VCU). Our Division of Hematology/Oncology has produced some good clinicians, researchers, and published work over the years (see Note 1). However, our division has lost four faculty members in 24 months to private practice. Another state institution has lost four medical oncologists in 6 months (to industry, health service nonclinical research, or other practice opportunities).

As a division, we had not successfully recruited any new clinical faculty except on the coattails of other people or programs for the past 6 years (see Note 2). The bulletin board is full of job opportunities, including academic, community, research, and practice. What follows is an attempt to understand why doctors are leaving academic practice, based on exit interviews and a 15-year experience, and some modest suggestions for improvement.

---

*From the Division of Hematology/Oncology, Department of Internal Medicine, Department of Medicine, Medical College of Virginia Campus of Virginia Commonwealth University, Richmond, VA.*

*Submitted on April 10, 2000; accepted August 4, 2000.*

*Address reprint requests to T. Smith, MD, Division of Hematology/Oncology, 1101 E. Marshall St, MCV Box 980230, Richmond, VA 23298-0230; email tsmith@hsc.vcu.edu.*

*© 2001 by American Society of Clinical Oncology.  
0732-183X/01/1901-260*

### WHY THINGS ARE SO BAD

#### *Financial: Not Enough Salary*

A host of troubles plague our recruitment and retention of oncologists; one of these problems is salary. The current average 1998 salary of medical oncologists in the United States is \$220,000, up 20% in the past 6 years.<sup>1</sup> There is a relative under supply of oncologists compared with other highly compensated specialists like cardiologists; the American Society of Clinical Oncology found that the supply just met the work force demand in 1998.<sup>2</sup> The oncologists who left for private practice had approximate first-year salaries of \$180,000 to \$250,000. The ads in the mail are for jobs with a first-year guarantee of \$225,000 or more; then, after that "the productive oncologist will earn a high income." In contrast, the MCV-VCU oncology salary began at \$80,000 and our mean was only 51% of the most recent national private sector average (\$253,000), worse than the percentage for most academic salaries (Table 1).<sup>3</sup>

#### *Financial Structure of Academic Hematology/Oncology Practice: Never Enough Revenue Unless You Have the Chemotherapy Concession*

The average oncologist revenue amount and source is very different from that of the average internist. Medical oncology is a complex specialty with long average visits, but the prevailing system of reimbursement is based on historical precedent and rewards the administration of chemotherapy. Only about a third of private practice revenue comes from traditional evaluation and management; the rest is from buying and selling chemotherapy (Table 2).<sup>4</sup>

Chemotherapy is the only commodity sold from doctors' offices.<sup>5</sup> Some of our internist colleagues are incredulous

**Table 1. National Academic 1999 Faculty Salaries by Specialty as Percent of Private Sector Mean**

Specialty	% of Private Sector Mean
Hematology/oncology	56
Invasive cardiology	61
Maternal/fetal medicine	65
Vascular surgery	74
Ophthalmology	74
Neurosurgery	74

NOTE. Private sector salaries are from the Medical Group Management Association report, 1999.<sup>3</sup>

that so much of the income comes from chemotherapy (one calls this “the dirty little secret” of oncology.) The ethics of this arrangement are complex, however. Without the revenue from chemotherapy, the office cannot run because so much nursing and support staff is needed; with it, the doctor has a potential conflict of interest to give chemotherapy and concentrate less on evaluation and management.<sup>6</sup> It also means that without this concession, academic oncologists will never approach more than one third of private practice income.

The problem is not lazy academic oncologists who do not work hard enough. Our clinical oncologists (those who are not primarily research scientists) do as much patient care as their counterparts in private practice<sup>3</sup> in the Southeast, approximately 5,386 relative value units (RVUs) (see Note 3).

The problem is that the chemotherapy and lab concessions have been given to the university hospital. This has dire financial consequences, as listed in Table 3. Our collection rate at Virginia Commonwealth University is a bit lower because of our managed care and indigent patient burden, but the real difference is in lab and chemotherapy revenue. Our cost per physician is actually lower than in practice because we have two to three support staff per full time equivalent compared with five for a practice physician (Table 3). But without the chemotherapy or lab revenue, we are just slow internists.

#### CLINICAL WORK TO BE DONE BALANCED WITH TEACHING AND RESEARCH

The intensity of oncology practice has grown exponentially, in our experience. Whereas 15 years ago there were a handful of drugs and palliative chemotherapy was tried once

**Table 2. Sources of Medical Oncology Practice Revenue**

Category	Approximate % of Practice Income
Evaluation and management	33
Lab	10
Chemotherapy administration and sales	67

NOTE. Table adapted from Oncology Reimbursement, 1993.<sup>4</sup>

**Table 3. Comparison of Hematology/Oncology Practice Characteristics With MGMA Median**

Category	MGMA Private Practice	Hematology/Oncology
Collection rate, %	62	54
Support staff,* no. of persons	5.19	2.24
Gross charges, \$	1,754,000	323,000
Lab charges, \$	148,000	0
Total practice cost, including drugs, \$	745,000	104,000
Total practice cost, excluding drugs, \$	368,000	104,000
Total operating cost, % of net revenue	67	58

Abbreviation: MGMA, Medical Group Management Association.

\*The exact number of support staff can be difficult to count in academic practice because there may be no dedicated billing clerk or reimbursement specialist; instead, the collections may be organized by payer, not by practice.

or perhaps twice, now there are a handful of new drugs each year. And the supportive care to take care of sicker patients who do not want to die (“...the widespread and deeply held desire not to be dead”<sup>7</sup>) gets ever more complicated. Slevin et al<sup>8</sup> has documented that cancer patients will risk almost any toxicity for a small chance of benefit, eg, 1% better chance of living longer or 10% chance of symptom control. It is wonderful that patients have these choices, but their care gets more and more complicated.

The academic practice faces special challenges because of the usual urban location, and the need to serve indigent patients who live there. The public (and physicians writing about their experience as patients) wants convenient services with good parking and available caring physicians. At our institution, which must minimize costs rather than maximize profits because of the high numbers of indigent patients, we have spent much effort trying to limit expensive antiemetics to where they will do the most good. Such limits to care, ie, rationing,<sup>9</sup> can lead to the clinician explaining for much of the visit why he/she prescribed prochlorperazine when all the patient’s friends in private practice got ondansetron or granisetron.

For hematologists/oncologists in academic practice these changes mean the era of limited practice is mostly over. It simply is not possible to see patients only 1 day a week and not take phone calls or handle emergencies. In addition, there is accumulating evidence of the superiority of concentrated, high volume practice associated with better medical outcomes.<sup>10</sup> For medical oncology, the available evidence suggests that high volume practice leads to better outcomes in testicular cancer, breast cancer therapy, and possibly lymphoma treatment. As one surgical oncologist observed, “Never trust part time pilots or part time doctors.”

There are additional pressures when teaching is added. No one knows in medical oncology how much longer it

**Table 4. An Attractive Recruitment and Retention Package for Academic Clinicians**

Category	Comment
Salary: equal pay for RVUs performed	Must come closer to market demands because oncologists are in short supply. Clinical effort should be compensated at market rates even if the division clinical revenue stream cannot support it. The income should be available in the institution because someone has the chemotherapy concession.
Recognition	Tenure and promotion based on reputation and clinical activity, not publications.
Support staff	To maximize office efficiency, the academic practice must emulate private practice in staffing ratios.
Make unique opportunities	Multidisciplinary teams dedicated to one disease can be productive and rewarding for both physicians and patients. They also offer unique collaboration opportunities with other subspecialties for research. Being a part of exciting translational research can be rewarding, too, and is more likely at an academic practice.
Dedicated pay for clinical teaching	This is nebulous in most institutions so there is no way to fit it into a salary structure. There must be explicit recognition that it takes time and takes away clinical income. Add 1/3 to the work RVUs, for instance, to compensate for the extra time spent with students, and pay for that time with educational funds.
Opportunity for research	This is one distinguishing feature from pure private practice. For some, it will be the main reason to stay in academic clinical practice, but not for most. And the more astute private practices are adding research, too, recognizing that it may be the best care, establish their practice as the opinion leader, and can even be profitable.
Accountability	The practice must have full accountability for risks as well as benefits, just like a group practice. This may create major problems of equity with other less lucrative subspecialties, like endocrinology, if income is kept within hematology/oncology. Most academic institutions will have major problems doing this because of under billing, poor information systems for tracking the complex chemotherapy problems, poor collection rates, and so on.

takes when there are students, but routine care takes one-third longer when medical students are in the office, in our experience. In practical terms, that means booking fewer patients or making them wait longer; either one will lead to lower RVUs and salary.

The inpatient work has become ever more complex. A month of attending on a 20-bed unit is exhausting, with anxious and sometimes untrusting families, insurance hassles, and Medicare reporting requirements for academic institutions. Add teaching, and these are 12-hour minimum days.

Add to this the lack of academic reward for clinical practice, unless accompanied by a documented national reputation secured by writing.<sup>11</sup> The junior faculty member sees the senior member with the largest clinical load getting more and more patients, less and less time for research, and never advancing in the academic ranks, or getting promoted without tenure, similar to not being a partner in the firm. A common refrain of those leaving has been "I don't want to be the next overworked, under-recognized senior clinician like \_\_\_\_\_ who always gets the extra months of attending."

As described, the current academic clinical job description is not much different from private practice (except for teaching and research requirements). We can imagine our colleagues saying, "Let's see...the same job, but the possible security of being a partner and controlling my own destiny...at a 300% raise..." We know that private practice faces issues of declining reimbursement, outpatient diagnosis-related group payment, and so on, but so does academic practice.

## SOLUTIONS, WITH AN EMPHASIS ON ECONOMICS

### *Recognize the Problem: Some Academics Are Made, Not Born*

A colleague recently stated that "...you almost had to be born an academic to stay in university hematology/oncology these days." You do need to be something, eg, independently wealthy, an inveterate do-gooder, like the flexibility that previously existed, or like teaching.

But it is not that simple. Many of our colleagues who left might have stayed if we had been able to make a package that was more competitive with the private sector and that rewarded what actually got done in academic clinical practice. If we continue, we will have an increasing number of academic institutions that do not have enough doctors to generate revenue to keep the ships afloat. Some of the high points of a recruiting package are listed in (Table 4).

### *Make the Practice Profitable*

One goal is to maximize the clinical revenue from each patient to support the academic mission. Although this may seem crass, it is critical to the success of clinical revenue. Each patient encounter must be examined for opportunities to collect revenue for the actual work performed. In our experience, academics are chronic under-billers. Table 5 details a recent audit of our division, as part of an attempt to fix billing and collections, and shows that, while we were holding medical care costs down by billing for low level visits, we were missing substantial opportunities to collect reasonable revenue. Plus, most centers do not have the

**Table 5. Office Visit Complexity for Established Patients**

CPT	Description, Established Office Visit	Distribution, Our Practice (%)	Expected Distribution, Private Practice (%)*
99211	Minimal	37	5
99212	Problem oriented	5	5
99213	Expanded	23	20
99214	Detailed	31	30
99215	Comprehensive	4	40

\*Data from a private practice consultant.

information systems to track the complex chemotherapy revenues; or, responsibility may lie with the pharmacy, not the oncologist. In some private practices, the billing manager is the most important part of the practice, and academic practices need to learn this.

Academic doctors may have to work much harder when they are seeing patients, too. A physician who sees a patient every 20 or 30 minutes until 3 PM cannot reasonably expect to make as much income as one who sees a patient every 15 minutes until 5. Some of this means just working harder and maximizing every part of patient flow. It means shorter notes, more coordinated care, shifting of some parts of care to other health care professionals, and so on. But mostly, it just means scheduling a patient every 15 minutes all day long and meeting the schedule.

#### *Breaking Down the Financial Barriers to Improved Care and Maximized Reimbursement*

If oncologists do not get the chemotherapy and lab revenue, someone else must be getting it. Much of the chemotherapy revenue may even be lost because of poor billing documentation, lack of response to denials, and lack of accountability. Most academic institutions have been set up to control costs, not maximize revenue. How many academic institutions can pull their last 100 patients' bills and show where each charge was billed, documented, and followed until paid? But it must be done.

Additionally, it will not be easy to make this revenue flow to those who generate it. Shifting revenue from other areas to hematology/oncology means that someone's budget will

decrease. And the current interpretation of Starke regulations may prohibit direct payment from the hospitals to oncologists as self-referral. One approach that some institutions have taken is to define and compensate at market value the other tasks that are performed, such as medical direction of the inpatient units (so called 'cost of service arrangements'). There are only a limited number of options, and these are listed in Table 6.

Of course, the other way to have more money for salaries is to reduce cost. There are multiple, proven ways to do this with clinical practice guidelines and standard management (Smith et al, manuscript submitted for publication). All these work, but will only be implemented if there is some accountability for doing so. In most instances, the physicians' actions will reduce total costs but not improve their own salaries unless revenue can be shifted from the hospital. If the hospital and physicians share a bottom line and act in concert to reduce expensive supportive care, such as erythropoietin, filgrastim, pamidronate, and expensive antiemetics, then the oncologist salaries will decrease dramatically unless there is a high proportion of capitated service.

And, finally, we could keep on in the same pattern. Lose a few more hematologists/oncologists to the private sector, and most academic divisions will have to limit access to care.

#### KEEPING THE MISSIONS ALIVE

We can imagine the angry letters now about this bastardization of 50 years of wonderful academic practice. We could even make a list of Frequently Asked Questions (FAQs) based on conversations these past 3 months (Table 7). All of these questions are reasonable, and for many, there is a good answer.

In conclusion, hematology/oncology divisions are having great difficulty recruiting and retaining expert, productive clinicians because of the widening pay disparity with private practice for similar work. It is tempting to leave well enough alone, but the experience here and at other institutions suggests more crisis than is perceived. If we do not change the reward structure of academic hematology/oncology practice soon, there may be too few physicians left to sustain the academic

**Table 6. Ways to Increase Medical Oncologist Revenue**

Option	Comment
Maximize the revenue from all services but not assume the chemotherapy revenue/costs	Academic hematology/oncology divisions' current model. May be most ethical but may not generate enough revenue to support adequate personnel or faculty salaries.
Shift the cost of practice (nurses, office staff) to the hospital, only bill professional services	Hospital may not be able to maximize revenue on chemotherapy, so will not want to assume costs. Physicians lose all opportunity for higher incomes but lower risks.
Take over chemotherapy concession	Maximum income opportunity but also risk. Plus, those who have current concession may not want to give it up.
Keep current model, shift revenue from chemotherapy to compensate oncologists, such as cost of service agreements	Must avoid quid pro quo self-referrals because of Starke regulations.

**Table 7. Frequently Asked Questions or Common Complaints Against Privatizing Academic Clinical Practice**

Complaint	Our Response
I can't see patient every 10 or 15 minutes	OK, then stop complaining about the salary.
I feel guilty billing for a Level 5 visit (even though it took 40 minutes and a Medline search)	See above
I came here to teach (or do research, etc)	See above.
It's unethical for oncologists to be selling chemotherapy; too much potential for conflict of interest.	See above.
If we pay you at market value we will have to pay the cardiologists at market rate, and we might go bankrupt.	If we keep far from market value, all the high salary doctors are at risk to leave.
All internists should be paid the same.	By this argument, so should professors of music. There must be some reflection of market value.
This goes against our mission of teaching and research.	Attention to billing at the exclusion of these missions may, but then all professions have to bill for their legitimate services. And unless we fix the current system to reward hematologists/oncologists closer to practice, there won't be enough left to complete the mission.
My incentives are different. I know some want the money, but I don't.	Evolve some mechanism to give it back to the department, or spread (pre-tax?) across the employees in the clinic who make practice possible.

mission. At a time of wonderful new treatments and when end-of-life care is finally being recognized as important, we need good researchers and role models. To not train, recruit, and retain them would be a shame.

#### NOTES

*Note 1:* The division has 13 full-time members split between MCV-VCU and the Veterans Administration. Examples of scholarly work in the past 5 years include first author publications in *The Journal of the American Medical Association*, *Blood*, *The Journal of Clinical Oncology*, and other journals; members who hold national research or administrative posts in their professional societies and serve on study sections for the National Institutes of Health, the National Cancer Institute, and the American Cancer Society;

several patents; and grants for the most recent academic year of over \$2,000,000, including grants from the National Institutes of Health, American Cancer Society, the Institute of Medicine/National Academy of Sciences, the Jessie Ball duPont Foundation, and others. The total clinical, research, administrative, and educational full-time equivalent positions (adding responsibilities that are formally counted) total 17.2; this does not include teaching on the hospital wards.

*Note 2:* We have just recruited one new faculty member and are in discussions with several others after fixing many of the issues outlined here, including substantial revisions in reimbursement and salary.

*Note 3:* The clinicians and clinical researchers, excluding only one clinical scientist, had RVUs from a low of 1,543 to a high of 9,297. The most productive clinicians had RVUs of 9,297; 7,270; 7,104; and 5,100 units.

#### REFERENCES

- Goldberg JH: Doctor's earnings make a stride. *Med Econ* 76:172-175, 178, 183-186, 1999
- American Society of Clinical Oncology: Status of the medical oncology workforce: The American Society of Clinical Oncology. *J Clin Oncol* 14:2612-2621, 1996
- Medical Group Management Association: Academic Practice Faculty Compensation and Production Survey: 1999 Report Based on 1998 Data. Medical Group Management Association, Englewood Co, 1999, pp 28-31
- Smyth A: Reimbursement issues for the oncologist. *Oncol Reimbursement* 1:1-4, 1993
- Kurowski B: Six key challenges in oncology disease management. *Dis Manage* 1:99, 1998
- Smith TJ, Bodurtha JN: Ethical Considerations in oncology: Balancing the interests of patients, oncologists, and society. *J Clin Oncol* 13:2464-2470, 1995
- Finucane T: How gravely ill becomes dying: A key to end of life care. *JAMA* 300:1458-1460, 1990
- Slevin ML, Stubbs L, Plant HJ, et al: Attitudes to chemotherapy: Comparing views of patients with cancer with those of doctors, nurses, and general public. *BMJ* 300:1458-1460, 1990
- Smith TJ, Hillner BE, Desch CE: Efficacy and cost-effectiveness of cancer treatment: Rational allocation of resources based on decision analysis. *J Natl Cancer Inst* 85:1460-1474, 1993
- Hillner BE, Smith TJ, Desch CE: Hospital and physician volume or specialization and outcome in cancer treatment. *J Clin Oncol* 18:2327-2340, 2000
- Levinson W, Rubenstein A: Mission critical-integrating clinician-educators into academic medical centers. *N Engl J Med* 341:840-843, 1999