The TNM Staging of Health Care Leadership

The Hayes Martin Lecture

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I spent my entire clinical career taking care of patients with head and neck disease. And my professional identity is deeply tied to the origins of the American Head and Neck Society. I have at various times served on the council of the American Society for Head and Neck Surgery and have served as its treasurer and president. Perhaps most meaningful, I had the opportunity to co-chair, with Eliot Strong, who then headed up the Society of Head and Neck Surgeons, the First International Congress on Head and Neck Cancer. It was a terrific opportunity to work with members of the Society of Head and Neck Surgeons, like Eliot Strong. The Congress went very well and Eliot and I were asked to chair the Second International Congress. And I was president of the American Society for Head and Neck Surgery during the third Congress. Those meetings went well, too, and we were laying important foundation stones for the future.

Looking at this society today, now a combination of these two great societies, I can look back with some sense of having perhaps played a small part in helping forge the real beginning of a truly collegial working relationship that culminated in a combined and stronger organization. This was only done by virtue of the hard work of many people since then, pulling together the skills and resources of these two organizations. Now the leadership is from both societies. I congratulate you on this accomplishment, which in the end serves all of us, and our patients, in a far more satisfactory way. Paul Levine deserves great credit for his current role in continuing to strengthen the society.

I have chosen to talk about leadership. When I thought about the Hayes Martin Lecture, I could not help but think above all that Hayes Martin was a leader, someone who helped not only to clinically and scientifically define the field of head and neck surgery, but who went beyond that and worked to define and promote the profession itself. He represents a quality of leadership that to me is something special.

The second reason I want to talk about leadership is that we are in a time of tremendous change in both the clinical science and practice of head and neck surgery—and also in our profession as a whole. But I believe that our specialty provides an advantage. Ours is an interprofessional, multidisciplinary field. It involves several surgical disciplines, of course. But it also involves medical oncologists, radiation oncologists, pathology, nursing, speech and language pathologists, rehabilitation specialists, social workers, and other allied health professionals. I think this is one of our great strengths as a specialty, and is one of the reasons that I was drawn to it. I think it gives us a leg up on the kind of leadership required in these challenging times.

My clinical training and early mentoring occurred at the University of Michigan in a relatively stable time in medicine, by men of great learning and skill, but also of compassion and wisdom. They were clearly star-quality clinician-scientists. But that wasn’t all they were. Their star status came not just from their own skills, but also from the fact that they worked easily in teams with other highly skilled people. They were open to new ideas and new approaches. They were willing to delegate and to share responsibility, though of course ultimate responsibility for the patient usually rested with them. And they were teachers. They taught not just what they knew, but what more you needed to know than what your own
training alone could ever teach you. People like Walter Work and Roger Boles. The same was true with my mentor and first chief, and our honored guest, Bob Cantrell. When I moved to the University of Virginia, Bob was a terrific mentor and became one of my closest friends, which is even more special. And there have been many, many colleagues in both societies who I have been privileged to work with and learn from. It is easy to see how, in tumultuous times like these, leadership can be especially important to the next generation of head and neck surgery professionals and, perhaps most important, to our patients.

In thinking about leadership, it occurred to me that the classic model of TNM staging can serve as a useful metaphor for talking about the principles, stages, and competencies of leadership.

A brief review of some of my own early work in TNM staging of head and neck cancers can help introduce the TNM staging of leadership.

I worked on TNM staging back in the 1980s. As a young surgeon and investigator, I was troubled by patients with early-stage I or II squamous cell carcinomas, whose pathology reports would come back indicating that the tumor was fully excised, and yet 6, 9, or 12 months later, developed recurrent disease. These tumors were obviously more aggressive than others at that stage. It was apparent to me that we needed markers of the biological behavior of these cancers. And we didn’t have them. While the staging model was a useful tool, it wasn’t sensitive enough.

I pursued the cell biology of head and neck cancers, focusing on clonogenic assays as predictive of action. Figure 1 shows some results from that work.

Although I was not able to pursue this as far as I would have liked, the attempt itself was very important for me. It taught me that I was going to have to reach beyond my own expertise. It was going to require new knowledge and working with new people who were developing new tools and markers—what, of course, we all know now as molecular biology and genetics.

So, looking back, I can see that I was in my own “T” phase of development—or perhaps I was in situ at this point! But I was beginning to understand in a practical way how significant progress for my patients (which after all was the primary goal) was going to require applying the leadership lessons from my training and taking real initiative to identify and work with others who could be helpful.

It was right about at this time that my life began to take a fateful turn. While my interest in this research never waned, I had a calling to become a department chair. I entered into the pathology of administration!

**TNM STAGING OF LEADERSHIP**

It would be useful to review my model for the TNM staging of leadership, as shown below.

T (Primary): Specialty/departmental
N (Nodal): Schoolwide
M (Metastatic): Academic health center (AHC), university-wide and beyond

- The “T” stage is where you are focused on your specialty and your professional and departmental responsibilities.
- At the “N” stage, your responsibilities expand significantly into peripheral nodes, perhaps as a department chair, in professional leadership activities or as a dean.
- When you reach the “M” stage, your reach has metastasized, whether AHC-wide or beyond. You have responsibilities and are having an impact far beyond where you started, and often in ways that you would not have been able to predict or control.

Now, this may look pretty straightforward. But I can tell you that, just as with the original TNM staging, this model turns out to require an equivalent set of “biological markers” and other tools—supplied by a growing team of staff, collaborators, and colleagues!

**THE T STAGE**

So I became chair of the Department of Otolaryngology–Head and Neck Surgery at Johns Hopkins. I was just starting to manifest as an administrator, in other words, as what many might describe as an early-stage primary tumor!

It turns out that it takes a great deal of complex activity just to manifest successfully at this “T” stage. I learned that there were many problems to solve at the departmental level, from understanding your role to finding and developing the resources necessary to be successful. You find that your faculty members have a variety of issues, spanning resources, morale, ability, and motivation. You find that the systems you need to understand and operate your department, like financial systems, billing, and so forth, are inadequate. You realize that it is your job to support and promote this group of people and to help provide the resources they need to succeed.

You discover that, though the dean and other chairs and faculty flattered you and led you to believe you were God’s gift to the medical school, once the day or two of your honeymoon is over, you have to wait in line behind the 25 other chairs who have pressing issues with the dean. And you had better not be asking for more space!

It is only natural then, that as a “T” stage administrator, the reality becomes clear: either you develop mechanisms to extend your reach or you face the inevitability of being marginalized by more aggressive colleagues.
What are these mechanisms or competencies (Table 1)?

1. Listening—I learned to listen to people who worked for me before responding.
2. Building mutual trust through integrity and respect.
3. Transparency—It is vital that everyone understand where we were going, the decision-making process, finances, and so forth. I called in every faculty member and told them what and where I thought the department needed to be and asked each of them to tell me how they were going to contribute to that. They all came back with constructive and useful contributions.
4. Learning on the fly.
5. Organizational agility.
7. Negotiating.
8. Walk-around management.
9. The most important reward: inspiration, personal attention, and praise.
10. Recruiting. For instance, still committed to finding solutions to the limitations of staging. I recognized by that time that we needed a molecular biologist in the department. I began the recruitment of a molecular oncologist, who was in Bert Vogelstein’s lab, who did join the department and has gone on to do critical work in molecularizing head and neck surgery.

One problem I faced, in particular, provides a good illustration of how one begins to grow from the “T” stage in a way that your leadership becomes manifest beyond your prescribed boundaries.

When I arrived at Hopkins in the early 1980s, there were no facilities for outpatient surgery—and I knew this was going to be a challenge. But I wanted to do the best thing for my patients. I began talking to patients about simply doing same-day surgeries. I also talked to nursing and other staff. With cooperation from all of these quarters, I began commandeering rooms and performing outpatient procedures. After a couple of these, I realized the tremendous outcomes I was generating for my patients in satisfaction, time, and costs. So I gathered census data, operating room schedules, and so forth, and did some simple addition and then multiplication, and realized that there would be multiples of these good outcomes if more physicians were to do what I was doing.

So I went to the chief executive officer of the hospital, Bob Heyssel, and explained this and showed him my primitive calculations and the possible savings—and he was intrigued. Suddenly, I was chairing a committee to create a same-day surgery suite in the Johns Hopkins Hospital. We were lucky enough to get this in place just before Medicare mandated it. Of course, at that point, I looked like a genius!

So after 2 years, my department was percolating along pretty well. I had recruited some very good people, and had a good base of research in the department. In fact, I had been recruiting some great young scientists out of Bert Vogelstein’s lab into our department. A great one, David Sidransky, did eventually join the department and has gone on to play a major role in molecularizing the field of head and neck surgery. I also managed to recruit a number of outstanding young clinician-scientists. And patient volumes increased substantially. We had one of the largest and most productive departments in the country.

This experience in particular taught me that it was important and rewarding to look at solving problems that the larger institution could benefit from. But this wasn’t a theoretical exercise for me. I came upon problems and issues that needed solutions. I learned that being a team player wasn’t what many people seemed to think, which was to keep your head down and don’t stir up issues or problems. Instead, I learned the value of taking on problems and bringing forward solutions that were a win for me and my department as well as for the institution. Solutions to big problems had big results. Solving them could be a big morale boost. The lessons here were not “Who moved my cheese?” but “How do we make more and better cheese?”

And because of my success with the same-day surgery suite, I suddenly found myself appointed associate dean for faculty practice.

So, with respect to my TNM staging as a leader, I started as a typical “T” stage, hardworking department chair, trying to do what was best for my department and me. But, being focused on the limitations of larger institutional issues that limited my ability to do the best for patients, I was driven to find new solutions that, it turned out, would affect the larger organization. Unknowingly, I was moving solidly into “N” stage leadership.

THE N STAGE

Then I was appointed dean. This was very different from any other challenge I had faced. I was now in charge of
one of the most prestigious schools in the nation. There were 1500 faculty, hundreds more students, internal and external policies and regulations, and trustees. But my responsibilities did not end at the school boundaries. There were local, state, and federal officials, and public and private sector organizations, all with interests, advice, and concerns. There were my peers at 124 other medical schools. And on top of all of that, there was the national crisis in health care spending and the health care reform efforts being developed by the Clinton Administration promising wholesale change in the organization of health care. This was the first time that I began to experience the sense that there was always a whole lot more going on, and a lot more problems to solve, than I had the resources or experience to address. Asked once to reflect on being a dean, I wrote, “Especially in times of change, it is very hard to find reliable rules or guidelines for leadership.”

It also became clear to me how easily a dean could retreat into his or her dean’s office node and operate within carefully protected boundaries, which were easy to erect. Whenever a significant new problem arose, all you had to do was name a new assistant dean! That would solidify the boundary very nicely!

Well, I did name a few deans, but for the most part, I did something else. What I did was to invite people to my office and encourage them to become a partner with me. I asked them for their perspective and expertise on whatever the issue was, whether to fix a system problem, chair a committee or head up a search, or establish a new business or academic unit. And I spent a lot of time traveling to meet and talk with a wide variety of people whose perspective and friendship would be valuable.

And I think it worked pretty well. We managed to completely revisit and re-create the medical school curriculum (before it became fashionable) in a very collegial and constructive process. We opened a fabulous new research building and moved to number one nationwide in research funding. We added new departments and many new faculty. We also added new dimensions to the School. For instance, we created an office of licensing, patents, and business development, and initiated the relationship with Aetna that led to the creation of IntelliHealth, the first major academic industry online e-health partnership.

And we also expanded our reach outside of our institutional node. We developed a very innovative community and business development partnership with our surrounding community and the city of Baltimore. And we became very involved in the development of national health policy in the context of the Clinton health reform plan.

Perhaps the major limitation within that organization at that time was the fact that while the clinical business was the dominant part of the revenue side of the AHC, as dean in that particular organization, I only had responsibility and authority for a portion of that business. This made it necessary to constantly be struggling to try to align visions and strategies with other major units. This ended up being a very difficult, trying, and ultimately divisive problem. And I have to admit that it went both ways. I was very assertive on behalf of a particular vision and of the medical school and faculty interests, just as my counterparts were assertive of theirs. All of this was a distraction from what should have been opportunities for transformational changes to take place.

Clearly, in my TNM model, I was metastatic. I was desperate to address and solve larger system problems that I was unable to address in that position. I could perhaps summarize this best by saying that as a surgeon, you need to learn that a school of medicine isn’t like an operating room. You can’t simply open up the patient, excise the problem, and close her up in the course of a couple of hours or a day. I had to learn process, bringing people along. To let some wounds heal from the bottom up. This also entailed learning to submerge your own ego so others can raise theirs up. This, too, was not an easy lesson.

My experience as a dean, as an “N” stage leader, led me to conclude that there are several leadership characteristics and competencies that are essential to “N” stage success. These are described in Table 1.

First, it is vital to have strategic planning and to plan in a way that can get a whole school and its many constituents galvanized in a common direction. It is equally important to develop a plan on how the strategy will be implemented. There is nothing so demoralizing to an institution as to go through a months-long process of planning and buy-in and raising expectations, and then see nothing come of it. An action orientation energizes people and creates more action. Incorporating a broad group of people into the strategy and planning process from many levels of the organization also engages as change agents people who must play critical roles in any successful plan’s implementation.

Also, when you are running an organization with a budget of hundreds of millions of dollars, you better know or learn about the business you are in. Pretenders won’t last.

Patience and composure and interpersonal savvy are a must. If you get ruffled by every annoyance or affront, you will not perform well.

Creativity is hard to describe precisely, but refers to the capacity to find elegant and innovative solutions to both traditional and new problems.

If you are going to have leaders around you, you need to delegate and then hold people accountable. Otherwise, you will have around you only followers. This has most recently been dubbed “distributive leadership.” In an academic environment, it is especially important to set high and specific performance expectations and then to empower leaders to leverage those expectations into performance that reverberates throughout the organization.

Finally, it is important to understand that not everyone wants to see you succeed. This came as quite a revelation to me. Some people actually work against you. They want you to fail. So a leader must learn about “self-defense” and managing adversaries or detractors.

This is not an exhaustive list, but one that contains the minimum characteristics I have found necessary to “N” stage leadership.

THE M STAGE

After 6 years as dean at Johns Hopkins, I was ready for an even larger leadership challenge, and I moved to my

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current position at Emory University to take a position that provided the opportunity to lead an entire AHC.

At Emory, the position of Executive Vice President for Health Affairs most certainly enables the expression of “M” stage leadership. Developing and leading a vision and strategy for a large system with separate, but interdependent and interactive missions and parts is just an extraordinary opportunity. But it is also daunting one. As all of you well know, an academic medical center with multiple schools, hospitals, clinics, laboratories, business units, 1700 full-time faculty, and 13,000 employees is tantamount to a small city, complete with multiple security, utility, food, and other essential services. You are responsible for organizations and operations that are well beyond your own discipline and experience, things like nursing and public health schools, a primate center, hospitals, and clinics of all sorts.

In this role, you are responsible for seeing potentials and defining a vision across schools and enterprise and to create incentives to bring people together who couldn’t or wouldn’t do so otherwise. You have to be able to secure resources from multiple sources that can enable you to fulfill the vision. But it is much harder, in fact impossible, to reach personally into all of the most important nerve centers of such an institution in order to personally encourage or enable new thinking and new growth. Teamwork is paramount.

What is often most challenging about this type of organization in our changing environment is that the idea of teamwork is still in tension with fundamental tenets of academic and professional culture. There is much about academic organizations and their culture that is stubbornly “primary,” parochial, and inward focused—where the leadership, too, is stuck in the “T” stage of localized activity. New challenges, especially change or even the threat of it, can generate fear and anxiety that in turn can move people and whole units into a protective and reactive mode.

The biggest challenge of M stage leadership (Table 1) is to articulate a vision that can penetrate these uncertainties and anxieties and institutional silos and structures to create buy-in, trust, and motivation. This requires all of the competencies and mechanisms one might have developed through the T and N stages of leadership. In addition to those, successful leadership at this level requires an unusual capacity for self-knowledge and for being honest with oneself. None of us is a perfect “10” in every dimension of leadership. What is most important at the metastatic level, where there is so much to know and manage, is to know yourself well enough to bring the right people into your team.

If you know that you are a “9” or “10” in many areas, but only a “5” in others, then you must be able to understand that and bring people into your leadership team who are 10s in those areas. And then you have to do something even harder, which is to listen to them and let them do their jobs. Bringing the right people together and managing them well is the most important competency of M stage leadership. This goes for everything from deans to senior system administrators, to trustees, to consultants, and administrative assistants. This requires a level of self-awareness and ego management that is very hard to overestimate or overstate.

At Emory, I think we have done this relatively well. And we have managed to accomplish a great deal in very difficult times. We have completely restructured and unified the health system. We have managed to recruit stellar new faculty and staff. We have added over $500 million in new buildings, including a vaccine center, a cancer center, a 325,000-sq ft research building, a completely rebuilt downtown hospital, and a new nursing school. We have increased our level of peer-reviewed research support by almost 100%. These, and many other developments and accomplishments, have been exciting and gratifying.

However, while these are very significant and are positioning us well for the coming decade of discovery and innovation in the biosciences and health care, there is one other development that I think will prove equally as important, if not more so. This year, we established the new Woodruff Leadership Academy.

There has been a growing appreciation of the need for AHCs to undertake leadership development and training. It is vitally important that we have throughout our organization young leaders who are able to develop visions and implement strategies for the new world of bioscience and health care that is ahead of us. This has to be one of our primary goals. As a department chair or dean, one naturally works with faculty and students to develop leadership. But unlike large organizations in the private sector, AHCs have not traditionally prioritized the deployment of institutional resources preparing leaders and decision makers. We have traditionally sought our leaders through external searches and recruitment. But even then, we often find that the field of candidates for leadership positions is often short of individuals with the team building and management skills we now need. When I looked at this problem, I saw pretty quickly that we have a responsibility to prepare such leaders. As one leading executive consultant has put it, “Great leaders … teach others to be leaders.”

The Woodruff Leadership Academy is a training program that I initiated and developed with input from leaders in Emory’s business school and other acknowledged leaders. Its mission is to cultivate and train promising young people for leadership. In early May 2003, we officially graduated our first class of 20 young faculty and staff who were chosen from a field of 100 nominees from across our center (Table 2). They had been through a
4-month intensive course of leadership seminars and group discussions, which culminated in 5 separate group projects. And this was no casual commitment. These people had to commit to weekend group seminar and group projects that consumed much of their free time. I attended almost all of the group seminars as well.

We now expect every single one of the Woodruff Leadership Academy Fellows, as we call them, to apply what they have learned in their work and to further develop their skills as leaders. A new class of fellows will be enrolled in the fall.

The Woodruff Leadership Academy is an important expression of the M stage of leadership: The stage at which you realize that all of your work will amount to nothing if there aren’t leaders who will come behind you and after you to carry on the important work, in our case, of making people healthy. Leadership at the highest levels means constantly and proactively teaching and replicating the characteristics of leadership not only among the leaders you already have around you, but in the younger people who must one day take your place.

CONCLUSIONS

So this brings me back to where I started this talk: to the utility of the TNM staging model. Work being done today at Emory and elsewhere has taken what I and others did in trying to elaborate TNM staging and moving it to the next level (Figure 2 and Figure 3). Work by Fadlo Khuri and colleagues shows the molecular down-regulation of abnormal signaling pathways in head and neck cancer by an oral compound. It shows that the down-regulation of the akt2 protein and the induction of apoptosis directly correlate with a clinical response in the induction setting in this patient with a cancer of the retromolar trigone (Table 3).

This is helping us understand which individuals’ tumors are driven by or addicted to certain cell signaling pathways, and why they are likely or not to respond to certain agents, paving the way for more individualized treatment of head and neck cancer patients. This shows that we are perhaps today getting close to the kinds of biological markers that were only a vision 20 years ago.

I mention this work because it reinforces the lesson that leadership at the highest levels of science, like leadership in other aspects of our work, means having a vision of where we need to be, based on understanding the limitations, problems, and opportunities we see in our current models, ideas, and practices. In science and medicine, we expect to see people who are carrying on promising work and ideas. We should expect and enable no less in leadership, where it is equally important that there be people, successors, to inform and realize the future.

I maintain that head and neck surgery is a cultivation of people who can bring special understanding to how medicine is changing and must change for the future. As long as it stays true to its interprofessional orientation, head and neck surgery should continue to be head, neck, and shoulders above many other specialties in preparing leaders for 21st-century medicine and science.

![Figure 2. Dosing schema of phase 2 trial of ONYX-015 plus chemotherapy in recurrent squamous cell cancer of the head and neck. Adapted from Khuri et al.](image)

![Figure 3. Ras actions. Ras genes signal through multiple downstream pathways. Shown in the upper portion of this figure are the proximal arms of the Ras signaling cascade with regard to regulation of proliferation, cytoskeletal organization, and apoptosis. The lower portion of the figure denotes the posttranslational modification that Ras requires, namely, farnesylation, in order to become constitutively activated. Adapted from Kies et al.](image)

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Abbreviations: HP, hypopharynx; OC, oral cavity; RMT, retromolar trigone.

*Lonafarnib.
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REFERENCES


