WOMEN IN THORACIC SURGERY

OUR STORY

30th Anniversary Celebration
January 2016
I am so pleased to be here tonight and visit with you all.

In addition, I am proud to look out and see how many women are here as well as men – your support has been critical to the success of Women in Thoracic Surgery, now 30 years old as a professional society.

There are many women of great accomplishment in our history, as well as in this room, and our story reflects that progress.

It also reflects where we, Women in Thoracic Surgery, started.
During this talk I would like to highlight significant events and accomplishments in our history and to do this I will discuss the beginning years when we got started in the mid-1980s, our early growth years, and then describe how we refined our goals with time and experience. Finally, I will touch on what I think the future horizon looks like for women in thoracic surgery.

I would also like to refer everyone to the recent 2016 *Annals of Thoracic Surgery* paper authored by Dr. Mara Antonoff along with 6 others, including myself, summarizing our history. It is published as part of the *Our Surgical Heritage* series, and it is a pleasure to see WTS recognized as part of that heritage.

As I proceed I will mention a few remarkable women who contributed to the field in academic surgery.

I would like to note that there is also a deep well of talent and accomplishment among all the members of WTS, half of whom are in private or community practice settings. All of these women are exceptional, and, although I am not able to review their individual and collective contributions, I know their work benefits many lives. Those contributions are immense as well.
The 1980s – Getting a start

Our story starts in 1986, around the time I first met Dr. Leslie Kohman at a national thoracic surgical meeting. I was very excited to hear that she too was a thoracic surgeon.

Leslie was inspired to introduce herself to me, and others, by one of her mentors, Dr. Patricia Numann, a pioneer general and endocrine surgeon who founded the Association of Women Surgeons in 1982.

Leslie followed suit, using Dr. Numann as her role model, introducing women thoracic surgeons to each other at group breakfasts and lunches during the STS and AATS meetings starting in 1986.
It was, simply put, a pivotal moment for me to meet other women surgeons and to begin to know names and faces. At first I was nervous with this special opportunity, but I quickly came to appreciate that it was relaxing to be in the company of other women who had the same aspirations as I did - to be the very best thoracic surgeons possible.

We met in an easy manner that was always energizing, and that had great value. For some surgeons like me, who missed out on mentoring by other women in our training and work settings because there were none, it was nice to benefit from such a collaborative environment.

There certainly weren’t many of us who met at any one time, with only about 5 women in active thoracic surgical practice in the United States over the course of the 1970s and early 1980s. Most of us were pretty young and inexperienced, and I am including myself in this group.

To identify as many women thoracic surgeons as possible, Leslie carefully surveyed the current training programs so she could invite them to participate in our meetings and receive the newsletter.
On occasion she got some revealing replies to her inquiries about women cardiothoracic surgery residents, such as this cultural bellwether statement by Dr. Denton Cooley in 1985, “We do not have any women going through our residency program ….. From the beginning of our residency program some fifteen years ago, we have not had a suitable applicant. While there are a few female cardiac surgeons in this country, none have distinguished themselves recently. I appreciate your interest in the fair sex.”

From the context I always wondered if perhaps he assumed he was actually writing to a man named Leslie…………..not a woman.

Needless to say with so few women surgeons, the first WTS meetings were focused on introductions to each other, and discussions about who was doing what & where. How did we come to our current positions, how was it going, where were there openings for training and jobs?
To extend our reach, we started a Women in Cardiothoracic Surgery newsletter in 1988, generously supported by Promedica, with Dr. Sharon Bogarty as editor. Here is what it looked like, complete with our old logo.

At this time Dr. Bogarty compiled our first list of the “known” women in cardiothoracic surgery: there were 30 women of whom 3 were international.

By the end of the 1980s there were 53 women certified by the American Board of Thoracic Surgery, and about 10 more women thoracic surgeons working overseas. Although this represented less than 1% of the total number of certified thoracic surgeons at the time, it was a big increase of 43 for the decade of the 80s.

This change was matched in the growth in membership of WTS, and by 1990 we had 84 members including surgeons in practice, residents in training, and international surgical colleagues.

In 1994 our newsletter was renamed the ORACLE, and has been for many years generously published on behalf of WTS by Scanlan International.
We all enjoyed the heterographic name ORACLE as it plays on the multiple meaning of sage guidance delivered by gifted women as well as the upper chambers of the heart.

The early issues of our newsletter posted mainly information about ongoing research topics or possible sources of funding, as well as contacts, mentors, & career opportunities. It let us know of appointments and committee activities and it very was helpful to know about other women exploring a wide range of surgical career options.

The ORACLE is now a robust e-publication that includes interviews, profiles, and essays by residents, medical students, and members across the full breadth of career experience.

WTS' original 30 members included some very remarkable women.

I would love to tell you the stories of them all, but time will not allow that.

But I will mention a couple of early innovators who helped make modern cardiothoracic surgery possible.
Perhaps the best known is Dr. Nina Braunwald, pictured here, who did years of research in materials engineering in a collaborative effort to make prosthetic surfaces safe for implantation in the human body. She also did years of research into technical surgical innovations so that surgical outcomes could be reproducible and safe. This pioneering work prepared her to lead the first team to perform an open mitral valve replacement at the NIH in 1960.

Not only was the operation itself a step forward, but it was done using a Braunwald/Cutter valve, one of the early implantation prototypes that were key to breaking the ground necessary to make mitral valve replacement an established procedure with durable and beneficial results. She was a surgical pioneer by any definition, regardless of gender. She was also the first women to be board certified by the ABTS in 1961 and the first woman to become a member of the American Association for Thoracic Surgery. She was the only woman with both of these credentials for decades until 1988.
As can be seen in this chart, as the first substantial wave of women completed training in the 1980s, women steadily gained membership to our national professional societies.

By 1996 both the STS and the AATS had admitted their first 10 women to membership.

As of year-end 2015, a total of 37 women have been elected to the AATS and 175 women are members of the STS.

There have been other pioneers among the WTS membership. One example is Dr. Margaret Allen, who was the first woman to perform cardiac transplantation in the United States. Dr. Allen went on to become the founder of an academic regional cardiac transplant center, and was the first woman – and first thoracic surgeon – to be President of UNOS, the United Network for Organ Sharing.

She supervised the early computerization of organ sharing in heart transplants to promote better equity in national, instead of regional, access to organs. And in 1995 Dr. Allen was awarded the first Braunwald Career Development Award from the Thoracic Surgery Foundation for Research and Education [TSFRE].
Both Drs. Braunwald and Allen were honored in 2003 by the United States National Library of Congress & National Institute of Health exhibition “Changing the Face of Medicine” and “Celebrating America’s Women Physicians” projects.

The 1990s – Early Growth
Over the 1990s Drs. Leslie Kohman, Phyllis Edwards, Jemi Olak and Rosalyn Scott served as WTS Presidents. WTS was incorporated as a non-profit professional society complete with bylaws, officers, and an articulated mission to advance the careers of women in thoracic surgery.

Women in Cardiothoracic Surgery became Women in Thoracic Surgery in 1994 to be consistent with the terms as used by the national professional societies.

We also started an annual evening reception to which we regularly invited speakers, using this opportunity to interact formally and informally with members. Among our speakers have been several remarkable women at the highest levels of academic leadership: Dr. Julie Freishlag, while Chair of Surgery and Surgeon in Chief at John Hopkins Medical Institutions and Dr. Diana Farmer, while Chief of Pediatric Surgery and Surgeon in Chief at UCSF Benioff Children’s Hospital in San Francisco. Dr. Farmer had also just become the second woman surgeon from the United States to be inducted as a Fellow in the Royal College of Surgeons in England. Last year our speaker was Dr. Diane Simeone, the Lazar J Green Endowed Professor of Surgery and Physiology at University of Michigan. The ability of WTS to attract as speakers for our receptions such surgical innovators and inspiring career role models has been a great boon to the quality of our annual receptions.

WTS also co-sponsored, with generous industry support from Medtronic and WL Gore, a WTS Scholarship Grant program available to all active members. This supported several WTS members
while they attended Kennedy School Executive Courses, AAMC Women in Medicine Faculty Development Seminars, and Executive Leadership in Academic Medicine Courses. The TSFRE also awards grants and fellowships on behalf of the Nina Starr Braunwald Foundation, providing career development and research funding for women in cardiac surgery. Dr. Jennifer Walker received the first Braunwald Fellowship and is now Chief of Cardiac Surgery at University of Massachusetts.

The 2000s – Gaining Momentum

By 2000, 108 women had been certified by the ABTS. As part of our 15th Anniversary celebration WTS held a Symposium to commemorate crossing this centennial threshold for women thoracic surgeons.
Papers reflecting the history of women in thoracic surgery were published in a special Supplement in the Annals of Thoracic Surgery. WTS enjoyed the participation at the event of many mentors and supporters, and it was a special opportunity to offer our appreciation of their backing and encouragement.

Among our new honorary members were Drs. Eugene Braunwald, Delos Cosgrove, Nickolas Kouchoukos, F. Griffith Pearson, Gerald Ranier, and Robert Repogle.

Over this second decade, WTS was served by Drs. AJ Carpenter, Mercedes Dullum, Margarita Camacho and myself as Presidents.

As the last decade of the 20\textsuperscript{th} Century closed, WTS wanted to reach out even more effectively to the upcoming generations of women. Not just women already interested in the field, but especially to younger women still in medical school, and even earlier - in college and secondary
schools - who might be interested in the specialty if they were able to gain access to women role models.

In this light, Women in Thoracic Surgery established two long-term outreach projects connecting to these next generations of talent.

The first – the WTS Mentorship Program – supports women of all career stages already committed to the field.

The second – the WTS Scholarship Program – supports young women who can benefit from examples of successful women thoracic surgeons.

First, let me highlight the Mentorship Program.

WTS has found that mentor relationships work well when based upon support and affiliation, while mentorship in the more traditional surgical environment tends to be hierarchical. Women
may find it hard to find a mentor who understands how they experience their professional environment, and who can also translate that understanding into an action plan that helps them navigate the surgical workplace.

Men and women do not always use the same approach to negotiation or to constructive disagreement and yet this type of skill, so different from surgical communication & clinical problem-solving, is key to building strong working relationships. Mentoring can be an important resource in learning new skills in how to understand these dynamics, and grow beyond them.

Our WTS Mentorship program was fully implemented in 2003. It is an organized, but yet fluid, program that connects women mentors with mentees across a national network as well as with online resources. This is key, given the geographic sparsity of women mentors in some areas and the changing needs for mentorship across career lifetimes. Also, the wider a mentoring network, the less there is a sense of isolation whether in academic or in private practice settings. Issues and questions are not the same for a woman in medical school as they are for a mid-career surgeon, and WTS supports both.

For example, it may be that as a medical student a young woman will benefit from guidance on how to properly build recognition needed later for residency application recommendations from faculty, while later on as a surgeon in her early career she may benefit from tips on how to ask questions during interactive discussion periods at professional meetings. She might approach
these topics via person to person mentorship, or online where they are discussed in 2015 ORACLE essays.

Mentoring is a great way to “pay it forward”, and is one of the core values for WTS.

In 2015, about 25% of the Active membership has been available as participating mentors through this program, and informally even more women serve as mentors on an ad hoc basis.

The second major initiative was implementation in 2003 of the WTS Scholarship Program for attendance at WTS & STS Annual Meetings. We began this program as the percentage of women training in thoracic surgery crossed the 10% threshold that year.

This benchmark program is now entering its 12th year, having awarded over $158,000 in scholarships to over 70 recipients.

This was the first outreach program of its type for a professional thoracic surgical society, and we are very pleased that its concept has been supported and widely adopted by our colleague STS &
AATS national organizations as complementary to the Looking to the Future and The Best And the Brightest initiatives.

Generous financial support has come over the years through WTS members, the Society of Thoracic Surgeons, and through industry sponsorship.

The Scholarship recipients receive a personal welcome by an active member of WTS who acts as their mentor for the WTS & STS Annual Meetings, making introductions and helping the recipient get as much as possible from the meeting experience. The selection process involves candidates writing essays based upon a timely question related to surgical care in the United States. WTS regularly receives huge volumes of applications, and the responses are always interesting and sophisticated. It has never been an easy choice to identify the number we can accept.

The Scholarship Program is especially important with the implementation of accelerated and integrated pathways for training. It is now critical we help women residents and students gain
insight at an earlier and earlier stage in their education into what an incredibly adventurous and gratifying career thoracic surgery offers.

Before I leave this second decade, I want to recognize several highly regarded academic surgeons who warrant special mention. Dr. Carolyn Reed became the first woman to become President of the Southern Thoracic Surgical Association in 2006, and the first woman to serve as Chair of the American Board of Thoracic Surgery. In 2013 Dr. Reed was further recognized after her untimely death as the first woman to be elected President of the STS. She has been missed.

Dr. Valerie Rusch has also achieved a similar level of distinction during this period, having held leadership roles in the AATS Council, serving as a Regent of the ACS & a Chair of the ABTS, and a long tenure as Chief of the Division of Thoracic Surgery at Memorial Sloan Kettering.

Among our international members, in 2010 Dr. Gunda Leschber became the first and only woman to be President of the European Society of Thoracic Surgeons and the first woman member of the AATS from Germany. She was also the first woman to head a Department of Thoracic Surgery in Germany in 2003, and has been named President of the German Society of Thoracic Surgeons for the 2015-17 term.
As a more mature society, WTS now sponsors a series of annual breakfast sessions of general interest at the STS Annual meetings, including topics relevant to career planning, opportunities for alternative research funding, & global surgical volunteerism.

At the 2011 Annual Meeting reception, WTS celebrated two historic milestones of certification by the ABTS. 2011 marked 50 years since the first three women were certified 1961 and the first year that over 200 women were certified overall.

As part of recognizing these two milestones, WTS leaders published a 2012 workforce report on women in thoracic surgery in the Annals.

There were some interesting results especially compared to a national benchmark workforce study by STS/AATS in 2010.
For example, overall career satisfaction was higher among the board-certified women thoracic surgeons surveyed when compared to the national benchmark - 65% of women were either extremely or very satisfied as compared to 46% of surgeons nationally overall.

Another significant observation was that women who go into thoracic surgery stay actively engaged in their career across decades. Women left the field only for the same reasons as do men – for example, retirement, disability, or career advancement.

This shows that women fully leverage their surgical training over long professional lifetimes, just like their colleagues who are men.

Once we get women into thoracic surgery, they succeed – and stay – with a high level of satisfaction on a par with the profession overall.

As we moved into our third decade, our Presidents [Drs. Yolanda Colson, Virginia Litle, and Jennifer Lawton] continued to emphasize WTS outreach to recruit and maintain engagement with the rising numbers of women interested in thoracic surgery.

In 2012 WTS developed a third, new outreach program as part of our ongoing core mission to provide an opportunity for young women to better see real-life examples of successful women thoracic surgeons working across all subspecialties.

To this end, WTS introduced the Scanlan International/WTS Traveling Mentorship Award. Recipients are awarded money so they can spend time with a WTS member shadowing them in
the OR, the clinic and, importantly, the home. This is a unique and creative opportunity allowing young women to sample in a personal way what a woman thoracic surgeons’ full life is like.

Also, WTS published a book in 2013, entitled “Women in Thoracic Surgery”, by dint of the hard editorial work of Dr. Shanda Blackmon. The book is part history and part photo portfolio, and many images were collected from our decades of gatherings, newsletters, & the Oracle, and are assembled together into a marvelous commemorative collection.

Its theme is that women who are thoracic surgeons look like .......... Normal women.
Highly accomplished women no doubt, but genuine people living rich and full lives that blend the personal and the professional.

Interestingly, in 2015 this same theme became the impetus behind the international web-based Twitter campaigns “#ILookLikeASurgeon” based upon the “#ILookLikeAnEngineer” campaign and the blog “Be The Role Model You Always Wanted But Never Had”. In August 2015 alone over 100 million Twitter accounts received messages a part of this campaign, as astonishing demonstration of the power of the online social world to deliver on its promise of promoting social change.
WTS has been a part of that change effort, having established a robust social online presence, led by Dr. Mara Antonoff to communicate with younger women who are using online tools to seek information and to connect.

Both communication tools, the Women in Thoracic Surgery book and our online presence, demonstrate how different is the contemporary way to connect compared to our original 1988 newsletter advancing the notion that there are many women who thrive as thoracic surgeons.
As of December 2015, the WTS Facebook page had 1264 “Likes”, with 811 followers. Over the last 3 months of 2015, this was a gain of 11%, or one new follower every day. We hope this solid increase in virtual will translate into sustained real interest in thoracic surgery among young women.

WTS is now a society with 177 members across all our categories, with 81 Active & International Members, and 62 Candidate members representing women surgeons who are in training.
What do I see for the future of WTS?

In preparing for this talk I did an internet search of the original 30 women on the first membership list in 1988 to see what these pioneering individuals are doing at this time in their careers.

Our surgeons, in addition to many remaining in active clinical practices, also contributed to health care as Medical School Deans, Co-founders/CEOs of medical technology companies, university trustees, medical directors of large surgical services, Chief Medical Officers, a health commissioner, and a Director of an academic Center for Medical Devices following her 3 terms as Chiefs of university surgical divisions. In my case, having received an Ally -Sheridan Scholarship Grant to attend the Kennedy School Executive Courses on Global Health Policy, I became interested in medical economics. As my interest evolved into access to health care for large
populations, no longer just my surgical patients, I became a Chief Financial Officer and senior administrator for the physicians practicing at a large urban tertiary care medical center.

I encourage our younger and mid-career women, as they look forward, to take note of such diverse, non-traditional professional activities and consider stretching in new directions. Lifelong learning is one of the reasons thoracic surgery is such an appealing profession - there is always more to learn. But this can also be true of skills that supplement your surgical life and it is valuable to take advantage of those opportunities.

I expect that as the future generations of women thoracic surgeons advance through their career lifetimes, they will explore many ways to combine acquired skills with new ones, and pursue an eclectic mix of personal activities which reflect the rich mix of talents these women possess.

A note about what we can learn from the social sciences.
Anthropologists estimate that a natural tipping point begins for neutralizing cultural bias when a minority becomes at least 15% of the total population.

Although only about 5% of boarded thoracic surgeons are women, the good news is that the number of women residents in thoracic surgery has increased from 9.8% in 2003 to over 22% in 2016.

Not only has the proportion doubled, it is now crossing this 15% tipping point where minority dynamics abate – We are well on our way to achieving a balanced environment.

274 women have now been certified by the ABTS, and the trend lines are clear.

I do think we are past the time of rooted biological determinism that led residency program chiefs to ask in interviews 35 year ago hilariously irrelevant questions such as, in my case, whether I could handle the physical demands of using the stairs if the elevator was broken.
There are now many women highly regarded as surgical peers by their colleagues, and recognized for their professional accomplishments.

We are very lucky – not everyone gets a chance to make such a real difference in this world.

It is a privilege to have opportunities to do good and do well as thoracic surgeons, and to enjoy lives of such usefulness and purpose.

WTS has been a pivotal mentoring society supporting women as they make important contributions in thoracic surgery. In the process, WTS have also become a recognized national organization as we forge valuable partnership to engage with the next generations of surgeons and make their opportunities equal regardless of gender.

As Nell Scovell so adeptly stated recently in a New York Times editorial commenting upon the challenges women experience in the entertainment business as writers,
“There have always been women who were successful against the odds.

Now we need to change the odds so that more women can be successful.”

It has been with just this purpose in mind that WTS has focused so intently over the past 30 years: to make it possible for more women to succeed in thoracic surgery.

It is no longer exceptional that talented women are successful thoracic surgeons, and WTS has played a very large – and proud – role in making that statement true.

Thank you so much for the invitation to speak here tonight.