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Presidential Plenary Session Exhibit Hall FG *Monday 9:45 AM*

Raison d'être in turbulent times: academics, legerdemain surgery, and a leadership theorem

Delegates packed into Exhibit Hall FG on Monday to hear the Presidential Address by 104th AATS President Lars G. Svensson. Dr. Svensson was introduced by David R. Jones, incoming President of the AATS, who highlighted Dr. Svensson's unique and diverse background, starting with his birth in Barberton, South Africa, to Swedish parents who were missionaries involved in building hospitals and clinics. Dr. Svensson's early life was marked by an adventurous spirit, surrounded by exotic pets and wildlife, which contributed to his robust and risk-taking character.

Dr. Svensson's academic journey began with a focus on advanced mathematics, physics, and chemistry, and he was initially uninterested in medicine despite his father's encouragement. However, after a year in Sweden, he felt a pull towards helping people, and applied to medical school in South Africa. His medical education at the University of Witwatersrand in Johannesburg was complemented by his engagement in various adventurous outdoor activities.

Professionally, Dr. Svensson's career took a significant turn when he was advised to switch from cardiology to cardiac surgery during his residency. This advice led him to further his studies and training at prestigious institutions like the Karolinska Institute and later at the Cleveland Clinic in the United States. His career flourished as he developed a significant practice and contributed to the field with over 700 publications and 17 inventions.

In summary, Dr. Jones portrayed Dr. Svensson as a distinguished leader, innovator, and educator in cardiac surgery, whose life and career are marked by a commitment to excellence and a passion for both his professional and personal endeavors. "He's a master clinician innovator and has participated in the education of hundreds of residents and students," said Dr. Jones.

"During his presidential term at the AATS, his leadership skills have been very much welcomed by the Board, and we congratulate him on a job very well done! Now, I'd like you to please join me in welcoming Dr. Lars Svensson, the 104th President of the AATS, to the stage."

Lars G. Svensson

> "Failure is not the endpoint, there is always learning."
>
> **Lars G. Svensson**

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Presidential Plenary Session Exhibit Hall FG *Monday 9:45 AM*

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As he began his captivating presidential address, Dr. Svensson shared a harmonious journey of personal and professional growth, underscoring the importance of purpose, integrity, and influence in navigating the complexities of leadership.

His central message was clear from the outset: great leadership is the ability and courage to initiate and create a vision based on challenges and opportunities that leads to a reliable strategy, taking into account pervasive culture, and through integrity, trust, influence, initiatives, and motivation, leads your team toward meaningful, measurable goals that have higher moral values, mission, and purpose.

Dr. Svensson began by expressing his deep gratitude to his family, colleagues, and the AATS community, acknowledging the sacrifices and support that have been integral to his success. As he reflected on his path, he emphasized the humbling experience of following in the footsteps of his esteemed mentors, including the "shining Fresnel lights" that have guided him.

> "Go out and lead with strength, conviction, courage, and fortitude. You will learn and grow. The leadership journey is an exciting adventure wherever providence leads you."
>
> **Lars G. Svensson**

Mastering the craft of surgical excellence

Delving into the question of 'why?', Dr. Svensson explored the existential, professional, and patient-centric dimensions of purpose. He acknowledged that while individuals must discover their own raison d'être, it is critical to find meaning and align one's values, particularly in these turbulent times.

Addressing the professional aspect of purpose, Dr. Svensson emphasized the ongoing, lifelong process of becoming a better surgeon. "I have calculated that it takes 40,000 hours to become a master cardiothoracic surgeon," he said.

He likened the pursuit of surgical mastery to the precision and momentum required in high-performance sports, such as Formula 1 racing and multi-hull boat racing. "In both sports, momentum toward your goal, and [keeping control] at maximum speed at the limits of traction, efficiency, constant improvement, and safety are critical to success," he reasoned.

Again, much like racing, Dr. Svensson stressed the importance of learning procedures in detail, utilizing simulation, mental visualization, and hands-on practice to achieve the elusive state of 'flow', where the surgeon's movements become seamless and efficient. He cautioned, however, that "fast is not 'fast'; the goal is 'smooth', which is fast, safe, and efficient."

As aspiring leaders in the AATS 104th Annual Meeting audience listened on, Dr. Svensson spoke of his early life lessons in leadership, eventually aligning with a mantra of 'great by choice' – one which embraces innovation and change, preservation of great practice and education, high-quality patient care and financial accountability, and collaboration with the best team members in the best environments.

Cultivating influence and leadership

Looking at the historical context of leadership, Dr. Svensson traced the emergence of this concept in human societies. He noted that in early hunter-gatherer and pastoral groups, the need for leadership was minimal, as these communities typically did not exceed 25 people, and consisted of extended families.

The transition to larger, more complex societies, however, necessitated the rise of new forms of leadership. Dr. Svensson highlighted the evolution of leadership from the rule of royalty, such as kings and queens, to the emergence of republics and the need for political and business leaders. "Indeed, use of the word 'lead' starts being used around 850 AD, referring to travel or flow (and hence perhaps from flow of lead when the metal is heated), and later the term evolved to mean popular leadership, namely replacing kings and queens," he said.

But how did early leaders take up their roles? Strong leadership is not natural, argued Dr. Svensson, and there have been many cases throughout history where those taking up leadership positions have been met with revolt. On the other hand, history has also taught us that leaders in some forms would rise from within, with villagers turning to experts in their craft for advice. Those professing 'medicinal power' are a great (if sometimes fraudulent or turbulent) example, with witches, potion-sellers and other more mystical figures making way to learned figures of medicine – those who became synonymous with authority, knowledge, compassion and guidance, armed with genuine interest and skill in improving the health and welfare of communities.

Professional leadership in modern medicine has roots in this important history: "Great leadership is the ability and courage to initiate and create a vision based on challenges and opportunities that leads to a reliable strategy, taking into account pervasive culture, and through

integrity, trust, influence, initiatives, and motivation, leads your team toward meaningful, measurable goals that have higher moral values, mission, and purpose," said Dr. Svensson.

As societies become more industrialized and the healthcare sector grows in size and complexity, the need for effective leadership in the medical field becomes increasingly crucial. Looking ahead, Dr. Svensson relayed that by 2030, healthcare is projected to be a $7 trillion industry in the United States, with Medicare, Medicaid, and commercial insurance payers each contributing approximately $1 trillion.

"These challenges will need to be managed by great health care leaders, and Guy David summarized these upcoming challenges in reducing costs of care very well in his presentation on Saturday," he said.

Dr. Svensson also cautioned about the potential risks posed by the rise of generative artificial intelligence (AI), warning that the danger with AI is that humans may lose their position of leadership. This underscored the importance of cultivating strong, visionary leaders who can navigate the complexities of the modern world, and ensure that human values and wisdom remain at the forefront.

Such leaders will need to exude transparency, fairness, and gratitude in building trust and fostering a collaborative environment. "Transparency, both for good and bad news, is important in building trust. It will also open you up to other people's ideas, feedback, and broaden your horizons," he said. Indeed, he cautioned that 70% of people leave their jobs due to the failure of their leaders, urging the audience to reflect on those within their own institutions.

Choosing and developing leaders

Reflecting on the qualities of effective leaders, Dr. Svensson highlighted the virtues of the 'greatest generation': "I'm reminded of what people say about the World War II generation, which can be summarized as having the following 'Hs': they were honorable, honest, and humble," he said. "And outwardly, they worked hard, they were humorous, and they had hope for the future. I think those are important virtues to consider as you gain influence.

"Let me remind you that as a cardiothoracic surgeon, you will give hope to more people than any other specialty, profession, or human endeavor. As you share hope for the future, you also should be transparent about reality. Remember what former Secretary of State Madeline Albright said: 'I'm an optimist who worries a lot'."

In discussing the process of choosing leaders, Dr. Svensson emphasized the importance of integrity, initiative, and emotional intelligence. He drew upon Jack Welch's '4Es' framework, which includes energy, the ability to energize others, execution, and edge (or 'grit'). The ability to endure and ensure (i.e. strength and reliability) are also important, he added.

There were several more 'Es' to recommend too, including empathy, education, élan (which combines style with energy, culture, and enthusiasm), and experimentation. "We need to make sure would-be leaders have integrity, show initiative, and harbor some measure of a final 'E' – emotional intelligence. Emotional intelligence is a whole subject by itself, and I would recommend the books by Daniel Goleman on the topic," he said.

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>
> **Lars G. Svensson**

How can leadership be measured?

What makes a great leader is not set in stone, but there are certain metrics of success that lend themselves to the perception. For CEOs of big companies, success seems to relate to decision speed, reliability, adaptability, and engagement. "But one-quarter of CEOs in the Fortune 500 sector are fired every year," said Dr. Svensson. "That cost to shareholders is $112 billion. So, we are left to wonder, how were the leaders who were retained as CEOs successful?"

Dr. Svensson argued that one might suggest traits would include the ability to make quick decisions, reliability in delivery (i.e. patient care), a mind for exploration of new ideas, and effective team management in terms of impact and engagement.

Also important, however, is the ability to push through when things do not go your way. Acknowledging the potential obstacles to successful leadership, Dr. Svensson invoked the famous quote attributed to Peter Drucker: 'Culture eats strategy for breakfast.' "Now, by all accounts, he probably didn't say that, but the aphorism highlights that it is very easy to roll out a strategy, but unless you get your community or team engaged by explaining why you need to do that, it's going to be really tough to carry out a 'change management strategy'," he said.

"However, failure is not the endpoint, there is always learning." To that end, he underlined the importance of success in leadership with a quote by President Theodore (Teddy) Roosevelt:

'It is not the critic who counts; not the man who points out how the strong man stumbles, or where the doer of deeds could have done them better. 'The credit belongs to the man who is actually in the arena, whose face is marred by dust and sweat and blood; who strives valiantly; who errs, who comes short again and again, because there is no effort without error and shortcoming; but who does actually strive to do the deeds; who knows great enthusiasms, the great devotions; who spends himself in a worthy cause; who at the best knows in the end the triumph of high achievement, and who at the worst, if he fails, at least fails while daring greatly, so that his place shall never be with those cold and timid souls who neither know victory nor defeat.'

Dr. Svensson also shared insights from his 'leadership course 101', using the analogy of a rat navigating the challenges of finding food and building a bridge to reach it. This metaphor highlighted the importance of vision, mission, strategy, tactics, and key performance indicators in effective leadership. "When you first draw up your plans and assess the problems, challenges, and opportunities to initiate and create a vision, you also need to engage as many people as possible in all aspects of creating the strategy and explain why," he said.

At a more personal core, he also underlined that successful leaders will also prioritize people's happiness and welfare, be accessible, treat people justly, and not postpone decisions.

A call to action

As Dr. Svensson concluded his address, he offered the audience a renewed sense of purpose, a deeper understanding of the principles of effective leadership, and a call to action to cultivate their own influence and make a lasting impact on the field of cardiothoracic surgery. He tied together a model of organizational behavior, strategic thinking, objectives and key results, and how to deal with culture.

By embodying the virtues of great examples from history, and prioritizing integrity, emotional intelligence, and a commitment to community, he hoped others would be inspired to embrace the mantle of leadership and make a lasting difference in the lives of patients and the broader healthcare landscape.

"Go out and lead with strength, conviction, courage, and fortitude. You will learn and grow. The leadership journey is an exciting adventure wherever providence leads you," he concluded.

Leadership Plenary Session Exhibit Hall FG *Sunday 9:30 AM*

Sharing the secrets of effective teamwork

Lessons from a 40-year journey of discovery

The AATS audience was treated to a fascinating lecture on transforming healthcare one team at a time on Sunday morning, with insights from 40 years of science shared by Eduardo Salas from Rice University (Houston, TX, USA). A prolific author with over 650 journal articles and chapters to his name, Dr. Salas has co-authored two books, and co-edited 37.

Dr. Salas is a Past President of the Society for Industrial/Organizational Psychology (SIOP) and the Human Factors and Ergonomics Society (HFES), Fellow of the American Psychological Association, the HFES and Association for Psychological Science, and a recipient of the Meritorious Civil Service Award from the Department of the Navy. He is the recipient of the 2012 Society for Human Resource Management Losey Lifetime Achievement Award, the 2012 Joseph E. McGrath Award for Lifetime Achievement from the INGroup, the 2012 Distinguished Professional Contributions & 2016 Distinguished Scientific Contributions Award, a four-time winner (2001, 2007, 2009 & 2013) of the M. Scott Myers Award for Applied Research in the Workplace, and the 2023 Wayne Casio Scientist-Practitioner Award, all of these awarded by SIOP.

In addition, he has been awarded the 2023 James McKeen Cattell Fellow Award from the Association for Psychological Sciences in recognition for outstanding lifetime contributions to the area of applied psychological research, and the 2023 American Psychological Foundation Gold Medal Award for impact in Psychology. He received his doctoral degree in 1984 from Old Dominion University (Norfolk, VA).

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>
> **Eduardo Salas**

Dr. Salas dived into the topic of teamwork, sharing a four-decade journey of insights from applying psychological science to teamwork, learning and development, safety and culture in complex and dynamic environments. Dr. Salas has a proven track record and passion for developing evidence-based principles, guidance, tools and interventions to improve teamwork, learning and safety across a wide variety of contexts such as aviation, oil and gas, military, emergency response, space exploration as well as healthcare.

"I want to educate you on the science of

teamwork," he began, "providing you with evidence-based insights on how to manage it." Using lessons learned from research across science, and 25 years in healthcare in particular, his goal was to challenge the audience about how to think about their teams.

He started his work in the Navy in the 1980s, his first position essentially being to build a key performance laboratory. After the USS Vincennes shot down Iran Air flight 655 (a civilian airliner) by mistake in July 1988, killing nearly 300 people, Dr. Salas recalled how the government stepped in to suggest that better team decision-making under stress would be required to try and avoid such disasters. "They said, we're going to give you a substantial amount of money to study this," he noted.

The parameters of this study were three-fold. One, that only experts would be studied; two, that real-world study would be used; and three, that validity would be ensured.

This began a career of research into how to promote excellent teams, which spread in validity out to many areas including passenger airlines, oil and gas drilling platform evacuation plans, and – to the more present day – space exploration, i.e. NASA.

"There is fascinating work being done right now," said Dr. Salas. "When we go to Mars, not if we go, we're going to send a team of four individuals, and they're going to endure a 30-month journey. It is going to take 10 months to get there, 8–10 months to do research, and 10 months to come back. And so teamwork and team cohesion will be paramount to the success of the mission.

> "The number one killer of teamwork anywhere in any industry, in any kind of team, and all around the world, is the lack of clarity in roles and responsibilities."
>
> **Eduardo Salas**

A crucial question across any organization is how do you turn a team of experts into an expert team, noted Dr. Salas. It falls within what is the phenomena you're trying to change. In order to understand teamwork and team performance, you need to be able to capture it, to measure, and to diagnose it, stressed Dr. Salas. "If you can measure, diagnose and understand a team, then maybe you can do something about it, such as team training, team coaching, and so forth. So, what science is trying to today is to essentially give us insight into those aspects."

Unfortunately, not all teams are created equal, and there are many threads to consider, including task independence, and when there is a need to bring in another individual's expertise to complete one's own tasks.

This has been a wealth of study over the past few decades, and Dr. Salas jokingly stated that he would have to spend a lot of time going through a vast number of meta-analyses to show what has been gleaned from research in this arena. Lucky for the audience, however, he shared some core insights in a more digestible way.

"We thought, how do we convey this wealth of information to practitioners like you?" To that end, Dr. Salas and colleagues organized the science around the seven 'Cs' of teamwork:

1. Capability: the right people with the right mix of knowledge, skill, and ability
2. Cooperation: the right attitudes about a team, and willingness to learn
3. Coordination: demonstrate necessary teamwork behaviors
4. Communication: effective communication

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with each other and the outside
5. Cognition: possess a shared understanding (e.g. priorities, roles, vision)
6. Coaching: leader and/or team members demonstrate leadership behaviors
7. Conditions: have favorable conditions (e.g. resources, culture).

The first entry, capability, might seem one of the most obvious: "You cannot be a good team member if you do not know your job!" exclaimed Dr. Salas. However, he warned that the science is actually some of the least mature in this area. NASA, for example, wants to go as deep as to have an algorithm that can assess capabilities and whether individuals are fit for (as an example) the Mars voyage. "We're working on that!" said Dr. Salas.

Looking at cooperation, interestingly, research has come out lately showing that when you build a group of 'stars' – e.g. the best technicians, the best engineers, the best nurses – performance over time goes down. But why is that? Dr. Salas used an example from professional basketball, where even the most excellent individual players did not ensure wins for the teams, unless they were willing to pass the ball when it counted. "You need people who are collective oriented," he said.

"The most powerful predictor that we have in our science is collective efficacy – the belief that the team has in performing tasks with confidence. The more confidence the team has, what happens? They're motivated, they keep going, they persevere. One piece of advice I give to you from my 25 years in healthcare (and it is something which you don't do often), is to celebrate wins. Celebrate and build confidence."

One of the biggest challenges in healthcare is psychological safety, added Dr. Salas. That is, the license that people have to speak up without repercussion. This is an area of much research still.

In coordination, it boils down to behaviors that matter, with performance monitoring, backup (i.e. support), and flexibility. "Essentially, this is team situational awareness," said Dr. Salas. "It is the peripheral vision that good teammates have: they are always aware of their surroundings."

In addition, coordination is about recognizing that you might do something different to a colleague, but together you can shift strategies to ensure that all sides complete the structure needed, and forge forward with mutual performance monitoring, supportive behaviors, and flexibility.

Communication is about information exchange, with a key underlying concept that more is not necessarily better. To illustrate his point, Dr. Salas recalled a real-world example of a high-end restaurant he had been to. After a meal at the Chef's Table in the kitchen, he was astounded that the whole service was almost silent. After speaking to the sous chef, he understood that the whole operation was like an orchestra, with each individual knowing their place, their timing, and when not to communicate without necessity.

"How confident are you that your team will succeed? It depends on whether you can align, work, realign, learn, and keep going."

Eduardo Salas

"The best operating rooms I have seen are quiet, too," noted Dr. Salas. "Quiet doesn't mean there is no communication going on, it just means there's no screaming or chaos! Communication is also about the sharing of unique information. The problem with teams sometimes is that they get bogged down talking about the same thing over, and over, and over."

Why some teams can maintain performance under stress without resorting to chaotic communication links to the notion of cognition, where implicit coordination lies in holding shared mental models and matters. What this means is that truly functioning cognitive teams anticipate the needs of others, and under stress can assist or fulfil that need without being asked.

Of course, the final two 'Cs' of coaching and conditions pertain more to the balance of centrifugal and centripetal forces that exist in team structures. Are coaches and mentors squashing their teams, or can they even contain and guide their brilliance? Are resources and culture symbiotic with the moral, professional, and behavioral aspects important to the wider teams and goals?

While the seven 'Cs' cover a lot of ground in fostering better teamwork, Dr. Salas recalled a corporate event where he was asked, if a gun was put to his head, which of the 'Cs' would he say is most important? "I said, well, if my life depends on it, it's cognition," he recalled. "You can be the best team in the world, you can have all the right people, and a good coach … but if the organization, the culture and the strategy is not aligned to support teamwork, the behavior will fade away."

If he had to choose, the second most important aspect would be capability. "Teamwork cannot trump lack of talent," he said.

As he approached the conclusion of his talk, Dr. Salas shared some evidence-based practice as to 10 key things that effective teams do, feel, and think:

1. They have clear roles and responsibilities
2. Are driven by compelling purpose (goals,

vision, objectives)
3. Are guided by team coaches (leaders) who promote, develop and reinforce
4. Have psychological safety and mutual trust
5. Develop team norms and performance conditions that are clear, known and appropriate
6. Hold shared understanding of task, mission and goals (hold shared mental models)
7. Self-correct in huddles and debriefs
8. Set expectations, have early alignment, and ensure clarity, understanding, sense of direction, and team priorities
9. Share unique information, and with efficient exchange
10. Surround themselves with optimal organizational conditions, including policies, procedures, and signals.

"The number one killer of teamwork anywhere in any industry, in any kind of team, and all around the world, is the lack of clarity in roles and responsibilities," commented Dr. Salas. "The second killer is when people don't know why they are there!"

Turning back to lessons learned from his 40 years understanding the power of teams across many different industries, Dr. Salas shared one of the most important lessons he has learned. "Teams that engage in the discipline of pre-briefing, performing and debriefing, outperform those who don't," he said.

"That is the most simple yet powerful tool all of you have once you leave this room to improve teamwork. I know debriefing is a challenge in healthcare, especially in very busy operating rooms, but sometimes it just takes 30 seconds, or maybe three minutes."

Crucially, coming together to understand how the team has operated before, during and after any given task or challenge ensures the best possible chance for solving problems as a collective. And it's not about striving to be perfect: "I spoke to a pilot who said he has never flown a perfect flight," said Dr. Salas. "He says to his crew, 'I don't expect this one to be either, so I need your input'."

Closing with a message direct to healthcare professionals, Dr. Salas commented: "How confident are you that your team will succeed? It depends on whether you can align, work, realign, learn, and keep going."

Leadership Plenary Session Exhibit Hall FG *Sunday 9:30 AM*

Driving innovation and collaboration in oncology

Closing Sunday's Leadership Plenary Session was Susan Galbraith, Executive Vice President, Oncology R&D, AstraZeneca (UK), who shared her path to leadership in scientific innovation, and building autonomous, high-functioning teams.

In her role, Dr. Galbraith has global accountability for the oncology portfolio from discovery through to late-stage development. Since joining AstraZeneca in 2010, she has been instrumental in bringing seven new medicines to patients, four of which are now 'blockbusters'. Prior to AstraZeneca, Dr. Galbraith held senior oncology research and development roles at Bristol-Myers Squibb.

A clinical oncologist by background, she trained in medicine at Manchester and Cambridge Universities, and has a PhD from the University of London. She holds an honorary doctorate of medical science from the Institute of Cancer Research, and is a fellow of the Academy of Medical Sciences. Dr. Galbraith serves on the American Association for Cancer Research Board of Directors, the Institute of Cancer Research Scientific Advisory Board, and the European Association of Cancer Research Advisory Council. She is also the current chair of the Board at Definiens AG.

In her introductory comments, Dr. Galbraith provided context about the company's ambition to eliminate cancer as a cause of death. "You have heard a lot about how to organize teams, the importance of culture, and the importance of different aspects of how you think about strategy," she began. "At AstraZeneca Oncology we have an ambition that will last for many, many years, which is to

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Susan Galbraith in conversation with Lars G. Svensson

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eliminate cancer as a cause of death."

To make this goal more tangible, they have set specific targets. In 2030, for example, they want to achieve in creating transformative regimens to increase the cure rate in lung cancer. "In metastatic lung cancer, we think that if we just delivered on the target product profiles of the drugs that we've currently got in development, we could potentially double five-year survival of lung cancer patients."

Dr. Galbraith explained that, to achieve this, they are deliberately building a diverse set of mechanisms and tools to invent new medicines. They have teams focused on specific tumor types like lung, breast, hematology, gastrointestinal, genitourinary, and gynecologic malignancies, as well as teams looking across the board.

She emphasized the importance of putting these new medicines into the context of the healthcare system to ensure they reach patients, and make a difference. This includes harnessing tools for earlier cancer detection, precision diagnostics, guideline-based care, and improving patient experience in clinical trials and daily practice.

"Guideline-based care implemented at the point of treatment is really important," continued Dr. Galbraith. "As the world becomes more complex, and the range of options become more complex, embedding of guideline-based care for every patient is crucial. And then we must not forget that actually what we must do is improve patient experience, both within clinical trials and day-to-day practice."

In terms of motivation, Dr. Galbraith highlighted the importance of common purpose and autonomy for highly educated teams, instilling an ability to feel like one is getting better at something, and growing. "I've laid out what our ambition is, and what our common purpose is across AstraZeneca, but why does someone's work matter? What does the particular work of a role, in the particular team that you are in, mean exactly?"

> "There are going to be difficult days, difficult weeks, and difficult months. As you go through, not everything's going to work," she said. "Those are the times when the purpose is the most important."
>
> **Susan Galbraith**

She went on to note that the second important aspect – particularly when trying to invent something that hasn't been done before – is to shift emphasis to autonomy. "For highly educated, motivated people in the workplace, there needs to be some degree of autonomy," said Dr. Galbraith. "How do you give the right degree of autonomy in a large organization that operates across the globe with different cultures and different backgrounds?"

Finally, workers need to feel they are getting better at something, thus Dr. Galbraith stressed the need to celebrate near-term wins, reward collaboration, and embed patient stories to keep people motivated. "We don't celebrate wins enough," she said. "Near-term wins matter, but just saying 'Thank you' is probably one of the most important things that we can do on a regular basis."

She added that many teams may not initially emphasize reward and recognition of behaviors, especially on an individual basis, but the bigger picture is also entrenched in collaboration and purpose for overall enterprise, and that needs celebrating.

Now that she has moved from front-line medicine to industry, Dr. Galbraith is one step removed from the patients that she serves, so she finds it really helpful to hear stories about the impact seen from the medicines that her company produces. Similarly, with AstraZeneca Oncology consisting of more than 8,000 people across the globe, feedback loops are essential. "Teams need very intimate feedback loops and connection," she said, adding: "There needs to be a single source of truth about what's happening in (for example) timelines, and clinical development plans."

Coming to the end of her opening remarks, Dr. Galbraith relayed how important it is for her workforce to continue to learn and grow. "Failure is an opportunity to learn. In fact, when you're doing experimentation in science, seeing what doesn't work is the fastest way of learning what might work. So, failure isn't something to be afraid of – it's something to embed and embrace within the organization."

Q&A opens up the floor to the audience

As she sat down with AATS President Lars G. Svensson, Dr. Galbraith answered a few questions as to her journey in science and healthcare. Beginning with her personal history, she recounted early influences from her father, a physics and math teacher, who sparked her curiosity in science from a young age. "My father taught us to always question why, instilling a sense of curiosity in me," she reflected. This curiosity, combined with her mother's limited opportunities in science due to gender barriers, fueled Dr. Galbraith's desire to pursue medicine, and ultimately find her passion in oncology.

An important question in leadership is how to navigate a demanding travel schedule, but Dr. Galbraith finds travel gives her ample time to ruminate on the work her teams are doing, finding inspiration in the people she works with, and the impact their work has on patients. "I'm highly motivated by the people I have the privilege to work alongside, and I love to see them overcoming challenges," she said.

As such, Dr. Galbraith again emphasized the importance of purpose, stating: "If one [regularly] goes back to asking why we are all doing this, I think that's really important." She also stressed the need to occasionally step back and assess whether one is spending time on the most impactful tasks.

When it comes to managing autonomy in a large organization like AstraZeneca, Dr. Galbraith believes in striking a balance. While formal decision-making forums exist, she encourages teams to take ownership of their projects, and to think creatively about making a difference. "When you're setting up teams, you're saying, 'Look, I'm not going to write the development plan for you. This is your task to think about the difference that can be made in this

context'," she explained.

This approach has enabled rapid innovation in areas like Ras targeting and cell therapy. "We have a team that's focused on trying to solve the problems around Ras – one which has a degree of freedom," she said. "Often, I hear people say, 'You've got to have a 'fast kill' program'. Well, not when it's a really, really, important program. You've got to have enough freedom so that, if it doesn't work the first time, you can still continue. Similarly, the cell therapy team has the autonomy to develop not just cell therapies for today, but also ones for the future that can be more off-the-shelf."

In response to another question, Dr. Galbraith acknowledged the challenges of diagnosing lung cancer at an earlier stage when compared to breast cancer. However, she believes there is great potential to improve lung cancer outcomes through earlier detection and innovative treatments in the neoadjuvant and perioperative settings, emphasizing the importance of collaboration with thoracic surgeons. "The referral patterns of where patients are coming in, and how they're being assigned to different treatment pathways is something that we need to collaborate on," she explained.

> "For highly educated, motivated people in the workplace, there needs to be some degree of autonomy."
>
> **Susan Galbraith**

"The debulking of cancer is really fundamentally important," she added. "I often think that we aren't quantitative enough about biology. The number of cells that are malignant is really important in the body. If you can debulk that to surgery, chemotherapy, radiation therapy, or other areas, you can really reduce some of the essential heterogeneity problems that you're facing."

In response to a question about fostering autonomy among clinical investigators, Dr. Galbraith highlighted the value of external science panels and advisory boards. "When I started at AstraZeneca within the oncology research and development organization, one of the first things I did was set up an external advisory board," she said. "I went to these esteemed colleagues and said, 'I need your help. I can't do this on my own'."

In terms of what neurological and cardiovascular oncology sectors can learn from each other, Dr. Galbraith believes in open communication and a willingness to learn from each other. "It's not just a one-way exchange," she highlighted.

In addition, appreciating the heterogeneity of diseases and tailoring treatments accordingly is key to unlocking improvements in cancer outcomes. Indeed, by splitting patient populations based on their specific pathology and biology, treatments can be designed more effectively. "That has been absolutely key in the last 20 years," she said.

Questioned on her leadership style, Dr. Galbraith emphasized the importance of resilience, particularly during difficult times. "There are going to be difficult days, difficult weeks, and difficult months. As you go through, not everything's going to work," she said. "Those are the times when the purpose is the most important ... it's the reason why you actually come to work every day."

Fostering a culture of innovation and collaboration is crucial for driving progress in oncology, and Dr. Galbraith believes that creating opportunities for serendipitous encounters, such as informal chats over coffee or lunch, can lead to breakthrough ideas.

In conclusion, Dr. Galbraith's insights on driving innovation, fostering autonomy, and building collaborative partnerships offer valuable lessons for leaders in the oncology field and beyond. By empowering teams, embracing heterogeneity, and staying focused on the ultimate goal of improving patient outcomes, significant strides can be made, and stumbles can be minimized.

Plenary Session Exhibit Hall FG *Monday 7:30 AM*

A new era for early-stage ALK+ NSCLC?

> "Adjuvant alectinib represents a new standard of care for patients with resected, stage IB–IIIA, anaplastic lymphoma kinase-positive non-small cell lung cancer."
>
> **Yi-Long Wu**

An important study on treatments for early-stage, anaplastic lymphoma kinase-positive (ALK+) non-small cell lung cancer (NSCLC) was outlined yesterday at the AATS 104th Annual Meeting by Yi-Long Wu, Professor of Oncology, Guangdong Lung Cancer Institute, Guangdong Provincial People's Hospital, Southern Medical University (Guangzhou, China). Professor Wu is the co-principal investigator and steering committee member for the ALINA trial, the first-ever phase III randomized head-to-head comparison between adjuvant alectinib and the current standard-of-care adjuvant chemotherapy in early-stage ALK+ NSCLC.

Today, ALK+ NSCLC accounts for around 4–5% of the NSCLC population. "Patients with ALK+ NSCLC tend to be younger, non-smokers, and receive a diagnosis with more advanced disease than those with ALK-negative NSCLC," said Professor Wu. "They are also at high risk for brain metastases, which are seen in up to 50 to 60% of patients."

Adjuvant chemotherapy has been the standard-of-care treatment for ALK+ NSCLC after surgical resection. "However, chemotherapy has only brought modest improvements in patient outcomes (a difference in survival of approximately five percentage points compared to observation), but with significant toxicities," explained Professor Wu.

The risk of disease recurrence remains high, with the five-year risk of recurrence or death ranging from 45% for stage IB disease to 76% for stage III disease. "Therefore, there has been an urgent need for improved treatment options in early-stage disease," he added.

Alectinib is a potent oral tyrosine kinase inhibitor that has already demonstrated significant efficacy and a tolerable safety profile in treating metastatic ALK+ NSCLC. Indeed, it is currently approved as a first- and second-line treatment for such patients. It demonstrated high levels of efficacy across a range of phase III trials (ALEX, J-ALEX, and ALESIA)[1–3] in patients with advanced ALK+ NSCLC. In the Phase III ALEX trial,[1] for example, patients with previously untreated advanced ALK+ NSCLC had significantly longer progression-free survival with alectinib versus crizotinib, with improved five-year overall survival, according to Professor Wu. "Alectinib has also shown substantial activity in patients with central nervous system [CNS] disease and effectively protects against and treats CNS metastases," he said.

The ALINA[4] study was therefore designed to build on alectinib's established benefit in advanced or metastatic ALK+ NSCLC patients by investigating whether this benefit could also be brought to patients in the early-stage setting. "ALK+ NSCLC represents a minority group of lung cancer patients," said Professor Wu. The ALINA trial collected data from a total of 257 patients, which is very valuable data for this patient population, he explained. "Over half of ALK+ patients had N2 disease, which is higher than what is observed in the all-comer adjuvant population," he said.

"This is quite consistent with our observations in real-world clinical practice, where most ALK+ patients have lymph node metastasis at their first diagnosis, which reflects the aggressive biological behavior of ALK+ tumors and reinforces that an effective treatment is urgently needed."

A primary analysis of the ALINA study, published this month, showed that adjuvant alectinib significantly improved disease-free survival compared with chemotherapy in the early stage of the disease, said Professor Wu. "Adjuvant alectinib was tolerable and in line with the known safety profile of alectinib," he commented. "Until now, surgery plus adjuvant chemotherapy has been the standard of care for resectable ALK+ NSCLC."

In addition to highlighting key data from the

primary analysis of ALINA, Professor Wu also provided additional exploratory analyses to better characterize this disease. For example, although the original trial design stratified patients by AJCC (American Joint Committee on Cancer) and UICC (Union for International Cancer Control) 7th edition staging, Professor Wu showed that a consistent disease-free survival benefit with alectinib was observed across all disease stages using the more recent 8th edition staging. "A consistent disease-free survival [DFS] benefit was also seen across nodal status subgroups," he added.

Additionally, a subgroup analysis based on nodal status showed similar DFS curves for the chemotherapy arm (including two-year and three-year DFS data) among patients with N0, N1, and N2 disease, said Professor Wu. "This suggests that even if the patient doesn't have any lymph node metastasis, the prognosis is as poor as patients with N2 disease with adjuvant chemotherapy," he explained.

"While with adjuvant alectinib treatment, the DFS curves were clearly pulled up. This highlights the need for adjuvant alectinib treatment for the patients, including those with node-negative disease," he added. Additionally, the exploratory analyses also demonstrated a consistent DFS benefit with adjuvant alectinib across subgroups by disease stage using the 8th edition staging manual.

"Adjuvant alectinib was tolerable, and its safety profile was in line with the known safety profile of alectinib, with few discontinuations due to adverse events," he said.

Other studies informing ALINA include the phase III ADAURA trial[5] in epidermal growth factor receptor (EGFR)-positive NSCLC, which showed a significant benefit in disease-free survival with adjuvant osimertinib versus placebo. Recent data indicate that this large disease-free survival benefit can translate into an overall survival benefit. For the ALINA study, overall survival data are currently immature, and longer follow-up will be needed, said Professor Wu.

"These data from ADAURA suggest that a large DFS benefit, like that seen in the ALINA trial, can translate into an overall survival [OS] benefit in the adjuvant setting," he explained. Since OS takes a long time to read out in early-stage NSCLC, it is also hoped that using DFS may accelerate the approval of new adjuvant therapies so patients can benefit more rapidly. The US Food and Drug Administration approved alectinib as an adjuvant therapy for resected ALK+ NSCLC on April 18, 2024.

Biomarker testing is vital for all patients with NSCLC too, regardless of the stage of disease, said Professor Wu. "Biomarker tests can confirm whether chemotherapy, targeted therapies, or cancer immunotherapies should be given alone or alongside surgery for the treatment of early-stage NSCLC," he explained. "Positive results like those from the ALINA study reinforce the need for routine ALK testing at diagnosis to identify patients who might benefit from targeted treatments like alectinib."

In conclusion, Professor Wu said: "Adjuvant alectinib represents a new standard of care for patients with resected, stage IB–IIIA, ALK+ NSCLC," adding that the data reinforce the need for routine ALK testing at diagnosis, across all stages of NSCLC, as per National Comprehensive Cancer Network guidelines. "We need to identify patients who might benefit from targeted treatments like alectinib," he said in closing.

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Left:

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Right:

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Leadership Plenary Session Exhibit Hall FG *Saturday 9:45 AM*

Measuring physician performance and safety with OKRs

On Saturday we heard an insightful presentation on the systematic approach to improvement in healthcare and beyond, rich with practical examples and strategic insights, focused on the implementation of objectives and key results (OKRs) to drive significant improvements in various operational and clinical areas.

Beri Ridgeway (Cleveland, OH, USA) detailed her work in using OKRs across a global healthcare system, drawing on her work as Chief of Staff of the Cleveland Clinic. She joined the Cleveland Clinic professional staff in 2009, after her previous positions as Associate Chief of Staff, Institute Chair of the Obstetrics, Gynecology, and Women's Health Institute, and the inaugural academic chair for the Cleveland Clinic Lerner College of Medicine Department of Obstetrics, Gynecology, and Reproductive Biology.

The opening gambit by Dr. Ridgeway was the concept of choosing to get better, and then actually doing it! "Getting better or improving is something that we all spend a lot of time thinking about and trying to do," she said. "You can think of your career, surgical skills, research, patient experience scores, or even your personal life (fitness, your relationship, or how you parent, etc.).

"We all want to be better, and I would wager that all of us try to be better, and put significant effort into improving. But let's face the facts – we're all busy. We are busy with work, we are busy with family, and we have many other obligations. A lot of things get in the way. We often equate activity with improvement, but that's not always the case."

Dr. Ridgeway shared a systematic approach to 'getting better', relying on focus (translating activity into meaningful impact), and a basic framework, providing examples of scale across the Cleveland Clinic.

"While none of us would consider ourselves to be average – or God forbid, below average – statistically speaking, in any given measurement, every one of us in the room in our lifetime will be at the lower end of the curve."

A significant part of her presentation was dedicated to confronting the comfort of mediocrity, using the metaphor of Lake Wobegon, where 'All the women are strong, all the men are good looking, and all the children are above average.'

Dr. Ridgeway challenged this mindset, particularly prevalent in medicine, where it can prevent genuine improvements in patient care and outcomes. What Dr. Ridgeway was getting at is that, if we focus too much on scenarios where the doctors are brilliant, all the surgeons are masterful, and all the patients are sicker than average, it ultimately gets in the way of actually being great and providing care for our patients who really deserve the best care possible.

> "Small, focused efforts in a targeted small group of people can have a huge impact."
>
> **Beri Ridgeway**

To address this, Dr. Ridgeway introduced the concept of OKRs, which she described as a transformative tool for setting and achieving goals. She credited the development of OKRs to Andy Grove of Intel and noted their popularization through John Doerr's book, Measure What Matters.

She outlined the five superpowers of OKRs:

1. Focus on what matters: by choosing complex, high-impact objectives
2. Align and connect: teams to work together toward shared goals
3. Commit to priorities: by ruthlessly choosing where to focus efforts

Continued on page 16

Continued from page 14

4. Track progress: to ensure accountability
5. Stretch for amazing results by setting ambitious, transformative goals.

At the heart of OKRs are objectives, which define what is to be achieved, and key results, which are the measurable steps to get there. "If you remember one thing from today, it's this: key results should drive the objectives outcome," Dr. Ridgeway emphasized. "You'll be working the key results, and your objective should move as a consequence of executing on those key results."

To illustrate the power of OKRs, Dr. Ridgeway shared a personal example of using the framework to have more quality family dinners. By setting specific key results such as 'Be home for dinner by 6:00 PM 20 nights a month', and 'Turn off the internet router between 6:00 PM and 8:00 PM 100% of the time,' she showed how individual commitments can drive a shared objective.

Turning to healthcare examples, Dr. Ridgeway first described how Cleveland Clinic's dermatology department used OKRs to appropriately document, code, and bill for the complexity of patients they treat. "They realized coding and billing did not seem to reflect the complexity of patients they were seeing," she said. By investing in educating a targeted group of high-volume physicians to increase their billing levels, the department was able to achieve a $1.4 million net revenue impact.

> "If you remember one thing from today, it's this: key results should drive the objectives outcome."
>
> **Beri Ridgeway**

However, Dr. Ridgeway's most compelling example was the Cleveland Clinic's journey to reduce sepsis mortality across its health system. Sepsis, a life-threatening condition caused by the body's response to infection, is a leading cause of death in hospitals. "According to the Centers for Disease Control, each year at least 1.7 million adults in the US develop sepsis, and nearly 350,000 die as a result," she said. At the Cleveland Clinic, sepsis mortality was identified as a priority when it was found to account for 40% of mortality across the system, with the main campus lagging behind peers.

To tackle this complex problem, sepsis mortality reduction became a CEO-level OKR, with the specific goal of reducing the observed-to-expected sepsis mortality ratio from 1.13 to 1.0 within 12 months. Key results focused on standardizing the sepsis response, administering antibiotics within one hour for suspected sepsis patients, and developing a standardized order set.

A sepsis emergency response team (SERT) was created at the main campus to provide rapid, coordinated care for high-risk sepsis patients. The SERT set its own OKRs aligned with the system-wide goal, using visual management to track progress and hold each other accountable. For example, they aimed to increase use of the sepsis order set from 2% to 75%, and administer antibiotics within one hour 75% of the time.

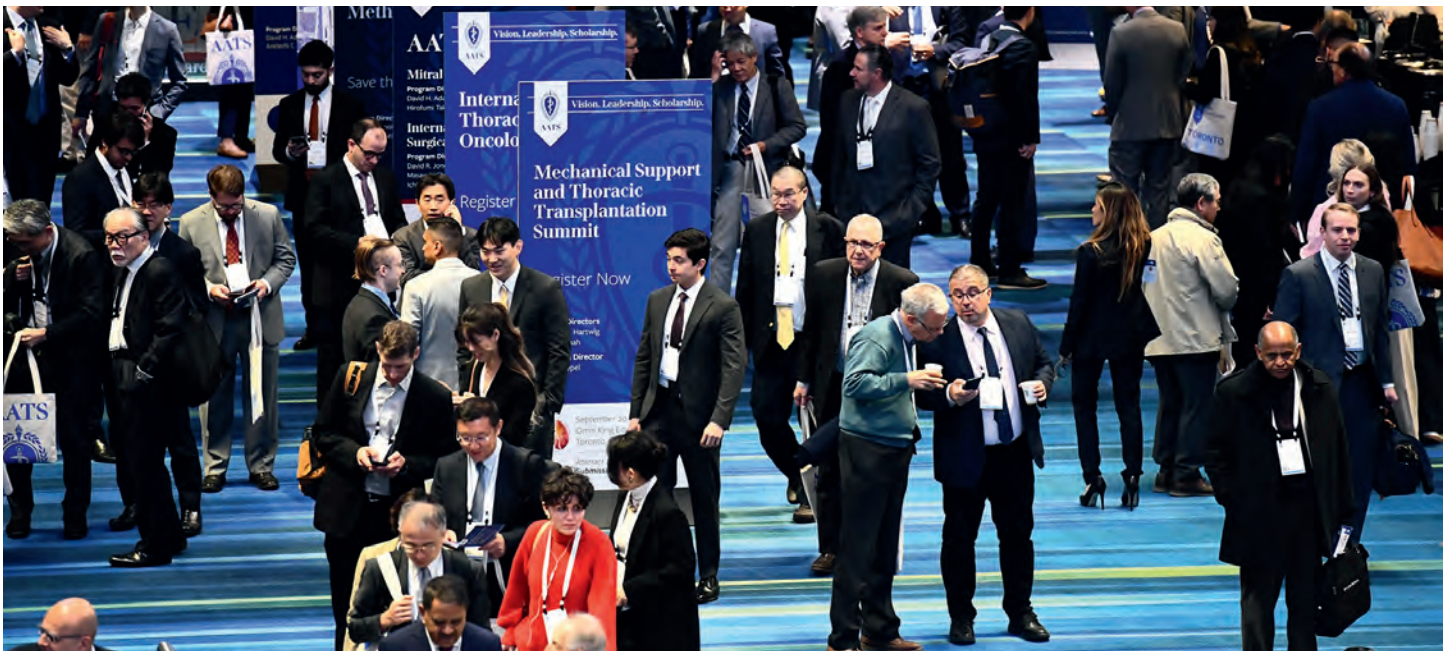
Through relentless focus and execution, the SERT not only achieved but exceeded their goals, decreasing the observed-to-expected sepsis mortality ratio from 1.12 to 0.9 in their cohort. However, Dr. Ridgeway emphasized that moving the needle in one area was not enough. To impact sepsis mortality across the entire 23-hospital system, a 'team of teams' approach was required. "This involved many different groups – physicians, advanced practitioners, and nurses across various specialties and locations, had to identify their piece of the puzzle and execute individual plans", she said.

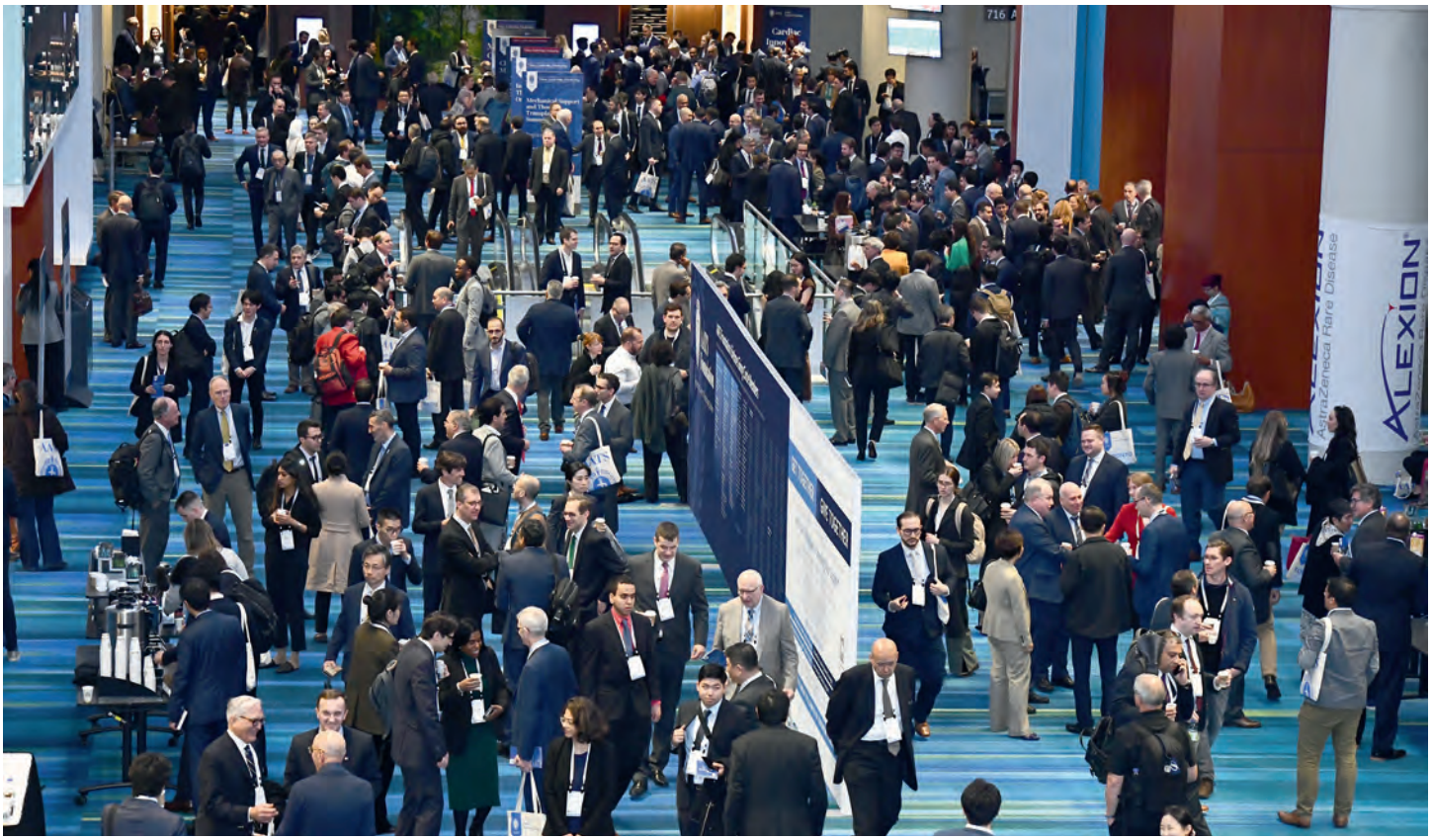
The sepsis OKR was cascaded down to individual departments and locations, with emergency services playing a key role. By implementing a standardized sepsis order set, emergency services helped drive system-wide progress. As Dr. Ridgeway explained: "The emergency services in turn ultimately cascaded this to individual physicians."

Tracking progress at the hospital level was critical, and Dr. Ridgeway shared the example of Marymount Hospital, a Cleveland Clinic community hospital. By understanding their specific performance and receiving concrete feedback, Marymount was able to steadily improve their sepsis metrics over time.

In closing, Dr. Ridgeway underscored the power of OKRs to drive complex improvements in healthcare. "We need to look in the mirror and search for opportunities to actually get better," she said. By focusing efforts, aligning teams, and relentlessly tracking progress, the Cleveland Clinic was able to make significant strides in reducing sepsis mortality.

As Dr. Ridgeway eloquently stated, "Small focused efforts in a targeted small group of people can have a huge impact." The lessons from Cleveland Clinic's OKR journey serve as an inspiring example for healthcare organizations striving to deliver the best possible outcomes for patients.





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