



AATS DAILY NEWS

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Guest lecturers (clockwise from top left) Peter Rea, Gary Ahlquist, Eduardo Salas, Tom Falkowski and Susan Galbraith take to the stage in Sunday morning's Leadership Plenary Session.

Thoracic Scientific Session: Modern Treatment of Esophageal Cancer Room 803 Saturday 7:30 AM

Chasing a more precise and personalized approach to esophageal cancer

Tailored treatments for better outcomes in esophageal cancer were placed under the spotlight on Saturday morning, with Daniela Molena, Associate Professor of Surgery at Weill Cornell Medicine and Associate Attending and Director of the Esophageal Program at Memorial Sloan Kettering Cancer Center

(New York, NY, USA), guiding the audience through the lethality, current practices and future treatment goals surrounding the disease.

Dr. Molena is Chair of the Thoracic Education Committee within the AATS, a member of the AATS Thoracic Quality Committee, and a member of the AATS Board.

She is also the vice president of Women in Thoracic Surgery, and a councilor of the Southern Thoracic Surgical Association.

Esophageal cancer remains a lethal disease, she began, and very little improvement has been made over the last 30 years. Indeed, it is well known

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Thoracic Scientific Session: Modern Treatment of Esophageal Cancer Room 803 Saturday 7:30 AM



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that the outcomes are determined by the stage and the presence of neuro-metastases. Esophageal cancer is one of the few cancers that is rising in incidence, demonstrated by multiple computer models showing that the increase is significant for both men and women. Fortunately, the way that the disease is approached has changed over the last several years.

“When I started training, I remember that we still treated esophageal cancer as systemic at diagnosis, with very few options, and mainly just focused on a palliative approach to care,” said Dr. Molena. However, different curative approaches are now available that are primarily based on the stage of disease, she added. Today, performing an esophagectomy for high-grade dysplasia would not be considered, and rarely for early-stage esophageal cancer.

A multimodality approach is commonly used for locally advanced disease, but when stage is the only determinant of treatment, the options are limited. Sometimes a one-size-fits-all approach is still used.

Dr. Molena referred to a case of a 69-year-old male patient (patient A) with a poorly differentiated adenocarcinoma, stage P3N1. He received induction therapy with leucovorin-fluorouracil-oxaliplatin (FOLFOX), and then went on to have chemoradiotherapy and chemoradiation in combination, to which he had a good response. The

“It is time to move forward from treating every patient the same and using a CROSS-for-all-regimen to offering a more precise and personalized approach.”

Daniela Molena

standardized uptake value (SUV) decreased from 24 to 4.

Dr. Molena compared this with another case of a 74-year-old patient (patient B) which was very similar. The patient had a poorly differentiated adenocarcinoma, T3N1, received chemoradiation, and had a good response with a decreased SUV. Both patients had a minimally invasive esophagectomy that was successful. Patient A had pathological T3N2 disease, three positive nodes, widespread recurrence within two months from surgery, and died after four months. Patient B had ToNo

disease, and is free of disease two years later.

As such, Dr. Molena posed the question as to what was the reason for the different outcomes between these patients, and how could patient A’s outcome have been better predicted? For one, patient A was found to have had microsatellite instability (MSI)-high disease. This wasn’t discovered until after surgery, resulting in a missed opportunity to effectively treat him.

Dr. Molena went on to stress that, today, most patients in the US are treated with a CROSS (chemoradiotherapy for esophageal cancer followed by surgery study)-for-all approach, often omitting the most important portion of the treatment: surgery. “How do we select the best chemotherapy treatment for each individual patient so that everybody can be a responder?” she said. “Unfortunately, we’re not there yet, but I hope to see a future where that will come.”

There are validated trial results in Dr. Molena’s own cohort of patients, which was compared to the standard CROSS regimen. As she described, patients that received FOLFOX had improved long-term survival. “It’s time to think about what we’re doing for patients, and perhaps change our chemotherapy approach,” she reasoned.

Recently, consideration has been given as to whether these patients should be receiving radiation, and Dr. Molena’s institution is changing the way in which it manages patients. Recent trials have shown that although the pathologic complete response (pCR) rate and the Ro resection is higher with radiation, the survival does not improve. “We need to demystify the better Ro resection with radiation, and use surgery to achieve better outcomes,” she said.

Dr. Molena went on to stress that it has been known for almost 10 years that esophageal cancer is a diverse disease at a molecular level, with distinct genomic alterations. The most detected cancers on The Cancer Genome Atlas are chromosomally unstable, and MSI cancers have a high mutation burden, and respond well to immunotherapy. In genomically stable tumors, unfortunately we have few treatment options. “My partner Dr. Sihag is looking at prognostic implications

of different molecular subtypes in multiple synchronous (MS)-type patients,” she said.

Dr. Sihag has shown that perhaps microsatellite stable tumors and esophagogastric junction adenocarcinomas with diffuse histology have an improved outcome, while gastroesophageal junction tumors with signet ring histology and tumors with chromosomal instability have a similar prognosis. There is a need to improve understanding and management strategies for these different types of tumors in the context of the disease.

“I am optimistic when I see so many amazing young surgeons studying this field, and I believe we’re not too far away from a personalized plan for chemotherapy based on these characteristics,” said Dr. Molena. “However, currently we have very few optionable drivers. It was unimaginable 10 years ago that lung cancer would have so much diversification. Now we have a large umbrella of possibilities for immunological studies in lung cancer.”

However, in esophageal cancer we’re lagging, added Dr. Molena, although there is hope things will change. “There are many trials now looking at different potential markers, and some of the data on advanced disease are promising,” she said.

Of note, some of these cancers have a high expression of programmed death-ligand 1, and a high combined positive score. Many trials that have looked at using immunotherapy in a preoperative setting have shown uncertain results.

In her closing remarks, Dr. Molena asserted how much the ‘heavy lifting’ of treatment is done by surgery. “We have new techniques and technology to perform surgery on these patients, but the old principles are still valid,” she said. “Much progress has been made in treating this disease, but the outcomes are nevertheless disappointing. It is time to move forward from treating every patient the same and using a CROSS-for-all-regimen to offering a more precise and personalized approach based on state as well as tumor characteristics at a molecular and genetic level.

“Surgery remains a very important part of treatment when done well, and fully supports the principle.”

Adult Cardiac Scientific Session: Tangling with the Tricuspid Valve Room 718A Monday 1:30 PM

Should moderate tricuspid regurgitation be repaired during mitral valve surgery? New evidence guides clinical decision-making

Whether moderate tricuspid regurgitation should be repaired at the time of mitral valve surgery will be discussed this afternoon by Ali Hage, a clinical associate in cardiac surgery at the Cleveland Clinic (OH, USA). He works under the supervision of A. Marc Gillinov, the chair of the Department of Thoracic and Cardiovascular Surgery at the Cleveland Clinic. In conversation with AATS Daily News, Dr. Hage stressed that it is unclear if tricuspid regurgitation should be repaired during this procedure. “As such, we conducted a study to investigate what happens to moderate tricuspid regurgitation after mitral valve repair, and how it might affect patients’ survival,” he said.

For many years, the decision to perform tricuspid valve repair for patients presenting with less-than-severe tricuspid regurgitation at the time of mitral valve surgery was based on the surgeon’s preference, said Dr. Hage. “It wasn’t really based on any strong evidence,” he added.

Surgeons are often reluctant to repair a leaky tricuspid valve because they assume there will be an increase in short-term mortality. Additionally, there is a perception of an increased risk of requiring a permanent pacemaker if the tricuspid valve is addressed. “However, several studies have found no increased operative mortality when repairing a leaky tricuspid valve at the time of mitral valve repair,” said Dr. Hage. “The issue of pacemakers remains an area of debate as well.”

In the age of evidence-based medicine, the study aims to provide more guidance on what to do in these cases. To that end, the team looked at all patients who underwent isolated mitral valve repair at the Cleveland Clinic between January 1, 2000, and December 21, 2022. They identified 5,467 consecutive patients who had mitral valve repair alone, without tricuspid valve repair. In addition to having severe mitral regurgitation, these patients had either no-, mild-, or moderate tricuspid regurgitation. “We followed these patients prospectively and looked at the change in their tricuspid regurgitation severity and survival,” noted Dr. Hage.

The team found that patients presenting

“Perhaps we need to adopt a more aggressive strategy in addressing moderate tricuspid regurgitation in patients presenting for degenerative mitral valve repair.”

Ali Hage

with moderate tricuspid regurgitation had increased risks at baseline, with signs of more advanced disease. “In these patients, we found that mitral valve repair improved the degree of tricuspid regurgitation, but this improvement was incomplete and unpredictable,” he said. “We also found that developing at least moderate tricuspid regurgitation any time after surgery was associated with higher mortality,

and that the degree of tricuspid regurgitation before surgery directly affected the likelihood of tricuspid regurgitation after surgery.”

These results complement findings from a recent Cardiothoracic Surgical Trials Network (CTSN) trial that looked at tricuspid valve repair in patients with moderate tricuspid regurgitation or less-than-moderate

regurgitation with annular dilatation. Patients who were undergoing mitral valve surgery for degenerative mitral regurgitation were randomized to receive a procedure with or without tricuspid annuloplasty. The primary two-year endpoint was a composite of reoperation for tricuspid regurgitation, progression of tricuspid regurgitation by two grades from baseline, or the presence of severe tricuspid regurgitation or death. Among patients undergoing mitral valve surgery, those who also received tricuspid annuloplasty had a lower incidence of a primary-endpoint event than those who underwent mitral valve surgery alone at two years. The reduction was driven by less frequent progression to severe tricuspid regurgitation, the researchers said.

“Taken together, the overall findings favor a more aggressive approach in addressing moderate tricuspid regurgitation at the time of mitral valve surgery,” said Dr. Hage. In addition, the research adds to the growing evidence that moderate tricuspid regurgitation is a marker of more advanced disease, which should probably be addressed at the time of mitral valve repair,

“In the age of evidence-based medicine, our study aims to provide more guidance as to what to do in these cases.”

Ali Hage

he added. The long-term follow-up of the CTSN trial will be very important, especially given the randomized nature of the study.

In conclusion, the findings from the study suggest that surgery for severe mitral regurgitation should perhaps be done before the onset of moderate tricuspid regurgitation. “Perhaps we need to adopt a more aggressive strategy in addressing moderate tricuspid regurgitation in patients presenting for degenerative mitral valve repair, particularly when other risk factors are also present, such as low left ventricular ejection fraction and higher right ventricular systolic pressures,” commented Dr. Hage.

Reference

- Gammie JS, Chu MWA, Falk V, et al. Concomitant Tricuspid Repair in Patients with Degenerative Mitral Regurgitation. *N Engl J Med.* 2022;386(4):327-339.



Thoracic Scientific Session: Education Start to Finish Room 802 Monday 1:30 PM

Racial differences in cardiothoracic surgery letters of recommendation

Thoracic education ‘from start to finish’ will be the theme of an important session held this afternoon, with invited experts tackling a number of core topics including the future leaders of cardiothoracic surgery, the influence of social media on training, holistic assessment, objective performance indicators, the impact of chatbots, and the link between training numbers and states with varying abortion laws.

In her presentation, Valeda Yong from Temple University Hospital, Philadelphia, PA, USA, will dive into the issue of racial differences in cardiothoracic surgery letters of recommendation. Dr. Yong is a general surgery resident at Temple University, and is part of a large multidisciplinary lab with her principal investigator and mentor, Dr. Cherie Erkmen, who have been investigating health disparities, of which workforce disparities are a component.

Speaking to *AATS Daily News*, Dr. Yong began by framing the lack of diversity in cardiothoracic surgery in general, recapping her work in gender disparities which she presented last year at the AATS 103rd Annual Meeting in Los Angeles. Firstly, with only 8.3% of cardiothoracic surgeons being women, it indeed puts cardiothoracic surgery as one of the specialties with the lowest representation. “Last year, I presented our study that identified several differences in cardiothoracic surgery fellowship letters of recommendation based on applicant gender and author-applicant gender pairs,” she said.

“Our findings highlighted key differences in how men and women applicants are described. Notably, letters for women applicants were more likely to discuss activities outside of surgery, including social connections, and emphasize the letter writer’s clout, while there were no differences in letters written for men by either men or women authors.”



“As recommendation letters are considered one of the most important aspects of an applicant’s portfolio, linguistic discrepancies in their letters can have unintended or potentially negative impacts on applicants.”

Valeda Yong

As for race, Black and Hispanic cardiothoracic surgeons make up approximately 3% and 5% of cardiothoracic surgery faculty, which are both less than half of the representation in the USA’s general population, noted Dr. Yong. “Our current study focuses on this racial underrepresentation and uses a similar framework as our prior study to explore differences in recommendation letters based on applicant race. As recommendation

letters are considered one of the most important aspects of an applicant’s portfolio, linguistic discrepancies in their letters can have unintended or potentially negative impacts on applicants.”

Lack of diversity has been shown to have negative impacts on patient safety, care, and access, continued Dr. Yong. Underrepresentation is a significant issue in cardiothoracic surgery, so understanding which factors could be contributing to a

lack of diversity in the workforce pipeline helps direct what changes can be made. “Our results can inform mitigation strategies for authors and readers of recommendation letters,” she underlined.

Unfortunately, while gender bias has now been studied across a multitude of specialties, fewer studies have investigated the impact of race, continued Dr. Yong. In fact, to her knowledge, racial bias in recommendation letters has yet to be studied in cardiothoracic surgery at all.

Could this be linked to a paucity of minority voices within the cardiothoracic profession? I.e., fewer forces to push such explorations into the spotlight? “There has been an increase in diversity initiatives to aid the inclusion and advancement of women and minorities in our field,” commented Dr. Yong. “While those who are underrepresented often undertake disproportionate responsibilities in mentoring, outreach, and diversity efforts, these efforts should be shared by all

thoracic surgeons regardless of race or gender?”

Dr. Yong expanded on the specifics of her own work investigating racial bias in letters of recommendation, detailing the examination of Electronic Residency Application Service [ERAS] applications to an accredited cardiothoracic surgery fellowship program between 2017 and 2021, which included 158 applicants and 597 letters. After de-identifying each applicant's profile, they gathered a variety of data from their applications. “Applicant self-reported race was dichotomized into White and non-White categories, while authors were stratified by specialty (cardiothoracic vs. non-cardiothoracic),” she explained.

“Applicant characteristics (age, board scores, etc.) were described using standard descriptive statistics and compared between applicant races. Recommendation letters were examined with linguistic analysis software (LIWC 2015) which provided word counts, standardized scores for four summary language variables

“While the majority of people acknowledge and support diversity and equity initiatives, our implicit biases are able to surface when given a blank page.”

Valeda Yong

(that describe authors' writing styles), and 25 additional word categories. We then performed a higher-level analysis to assess language associations between applicant race and author specialty.”

As expected, Dr. Yong and colleagues found that language used in letters of recommendation were influenced by applicant race. In summary, White applicants received letters that described them as more ‘driven’ than non-White applicants, while non-White applicants received letters that were more ‘authentic’ and ‘past-focused’. “When focusing on how cardiothoracic surgeons were influenced by applicant race, we found that they wrote longer letters

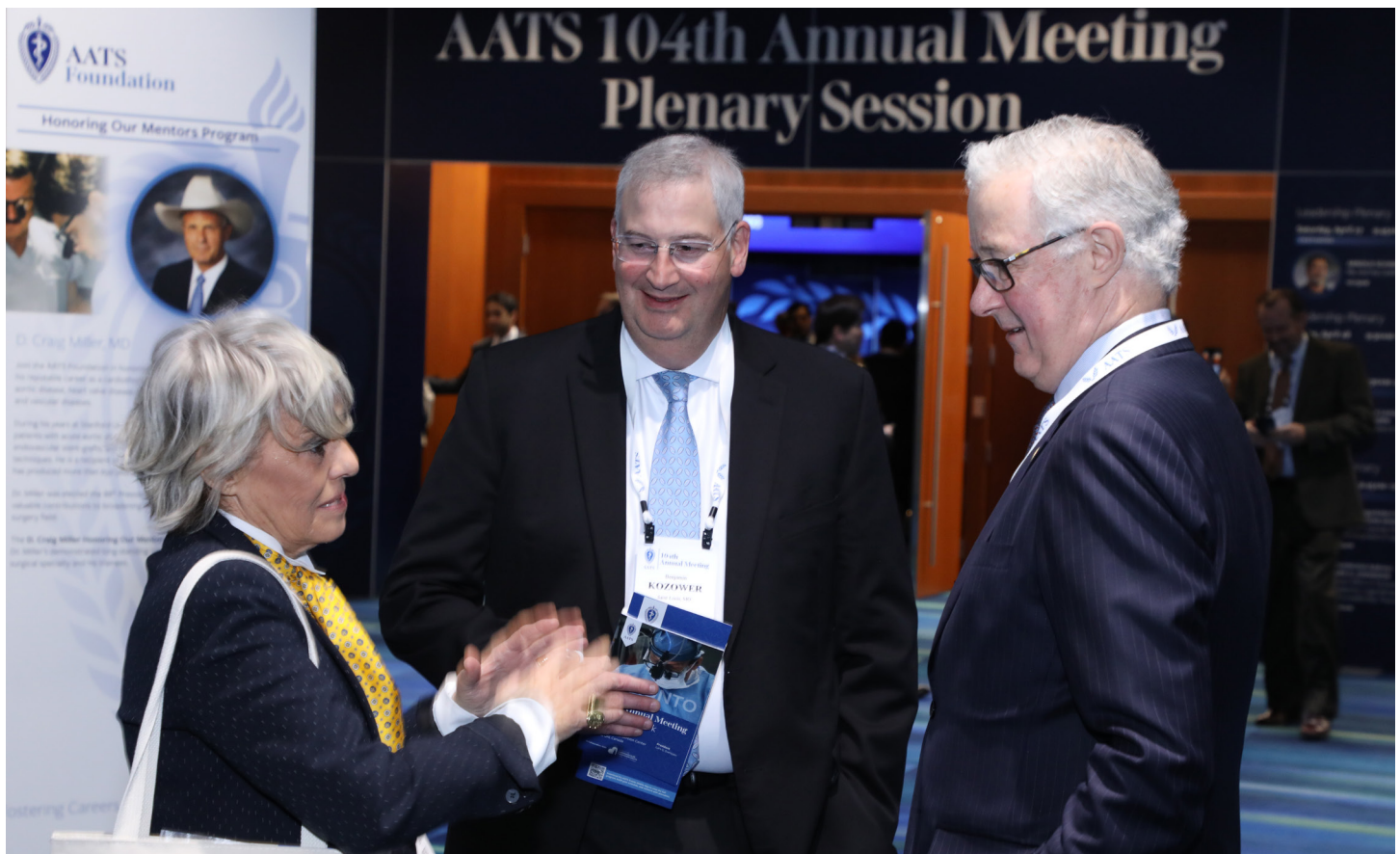
with more ‘standout’ adjectives (e.g., ‘amazing’, ‘outstanding’, ‘exceptional’) for White applicants, but used more ‘perception’ terms for non-White applicants (e.g., ‘appears’, ‘looks’, ‘speaks”),” she said.

But are the drivers behind racial differences in letters of recommendations nuanced, or even unexpected to those who are making them? “The primary driver behind the differences seen in recommendation letters is likely the natural implicit biases that we as individuals carry with us, as exemplified by Implicit Association Test results across a multitude of research studies,” stressed Dr. Yong. “While the majority of people acknowledge

and support diversity and equity initiatives, our implicit biases are able to surface when given a blank page, i.e. the current standard for letters of recommendation.”

The big question remains as to what can be done. As Dr. Yong underlined, individual accountability and reflection are important, and letter writers can develop a set of standards that reflect qualities they think are important for an applicant. They can also create a standardized letter format that is used for each applicant while being mindful of their own implicit biases. “By being intentional and carefully reviewing their writing, they can identify and correct any unintended comments that may be perceived negatively,” she said.

“From a program standpoint, setting standards on how they evaluate each applicant and what qualities are important to them would allow applicants to be evaluated the same way. Looking ahead, we plan to follow up with a study focused on how each academic rank (in particular) is influenced by applicant race and gender.”



Congenital Innovation: Addressing the Patient with Complex Transposition Room 716 Saturday 4:15 PM

ccTGA – single or double ventricle repair

An alternative technique to treat congenitally corrected transposition of the great arteries (ccTGA) was addressed on Saturday by Edward Buratto, an early career researcher at the Royal Children’s Hospital (Melbourne, Australia). Trained in cardiothoracic surgery, Dr. Buratto is currently completing additional subspecialty training at the Royal Children’s Hospital in pediatric cardiac surgery. His research interests include all aspects of congenital heart disease and pediatric cardiac surgery, as well as aortic valve surgery in young adults and ccTGA. “It is a very complicated condition – the patients are very variable and the range of surgeries that can be offered are very broad,” he explained. “Furthermore, it is an extremely rare condition, and most hospitals will only see one or two patients a year with the condition.”

A particularly good example of how varied the potential pathways are was presented at the AATS 100th Annual Meeting,¹ noted Dr. Buratto. A retrospective review of a large cohort of patients diagnosed with ccTGA from the Cleveland Clinic, coupled with prospective cross-sectional follow-up, showed surgical outcomes representing the full therapeutic spectrum. Seventy-nine patients with ccTGA underwent anatomic repair, 45 physiologic repair, 24 Fontan palliation, and 6 primary transplant.

Today, and increasingly so, the current trend in pediatric heart surgery is to pursue two-ventricle repairs, even in the most complex cases, said Dr. Buratto. The study he outlined focused on those with a particularly complex anatomy who, instead of undergoing a two-ventricle repair, underwent a single ventricle palliation (SVP). This procedure

“Ideally, we need a prospective multinational population-based database so that we can better understand the natural history and outcomes of various surgical approaches.”

Edward Buratto



tends to be performed in patients with ccTGA due to either hypoplasia of one ventricle, or anatomic complexity rendering biventricular repair unfeasible. “Our aim was to understand what the outcomes were with a more traditional SVP in these patients,” he said. “Really, only small studies of SVP in these patients had been conducted before.”

This multicenter, international, retrospective study, which took place in 29 tertiary hospitals in six countries from 1990 to 2018, is therefore a much larger study. All patients diagnosed with ccTGA who underwent SVP were eligible, amounting to 213 patients. Dr. Buratto outlined the results in his talk. “In this large study we found that the outcomes of SVP were excellent,” he explained.

In some ways the results were surprising, Dr. Buratto told *AATS Daily News*. “We demonstrated better survival than in patients with other types of lesions who are undergoing SVP,” he said.

Although this has been demonstrated in small studies before, it could easily have been due to the small number of patients and short follow-up, he added. “Our study is much larger, has much longer follow-up, and confirms the excellent survival,” he explained.

Despite the results, however, Dr. Buratto advises caution: “I think it should temper our enthusiasm slightly when considering a very complex biventricular repair, as we know the alternative has good outcomes. Our study is somewhat controversial in that it goes against the current trend in our field, which is to aggressively pursue biventricular repairs.”

What is important, however, is to show that SVP may be a good choice in those who are not ideal candidates for a biventricular repair. A classic example

“Our study is somewhat controversial in that it goes against the current trend in our field, which is to aggressively pursue biventricular repairs.”

Edward Buratto

would be a patient who undergoes a complex biventricular repair, survives, but returns a few months later in heart failure and ends up requiring a heart transplant. “This is a situation that most surgeons would have observed. Many, I think, have wondered if an SVP strategy might have been better,” he said. “Our study suggests that the outcomes of an SVP in these particular patients are excellent.”

Dr. Buratto noted the many challenges in studying ccTGA, particularly the heterogenous nature of the disease and the rarity of the patients. “The best way to overcome these is through large collaborative studies. Ideally, we need a prospective multinational population-based database so that we can better understand the natural history and outcomes of various surgical approaches.”

References

1. Barrios PA, Zia A, Pettersson G, et al. Outcomes of treatment pathways in 240 patients with congenitally corrected transposition of great arteries. *J Thorac Cardiovasc Surg.* 2021;161(3):1080–1093.e4.



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Edwards



AATS/WTS Diversity, Equity, and Inclusion Room 718A Monday 4:15 PM

How to reevaluate DEI in a changing landscape

Diversity, equity and inclusion (DEI) will be laid bare this afternoon by Ashley P. Oliver from the Division of Cardiothoracic Anesthesia at the University of California, Los Angeles (CA, USA), during a joint AATS/Women in Thoracic Surgery (WTS) session at the Annual Meeting.

“One core aim of my talk is to rehabilitate and diffuse the charged conversations about DEI from a more adversarial landscape, and instead to imagine with the audience whether we can recast the mission as something more universal,” Dr. Oliver said in conversation with *AATS Daily News*.

“Many professions, including medicine and non-surgical subspecialties, struggle to consistently create spaces where women and racial and ethnic minorities can grow and thrive, especially in the context of positions of leadership and influence.” Admittedly, this is somewhat of a generalization, noted Dr. Oliver, and there are some medical specialties that have made greater advances in this realm.

“When reviewing the literature on diversity in cardiothoracic surgery,¹⁻⁵ I do start from a place of empathy, as cardiac anesthesia is also on a path to grappling with the importance of this issue and how to make a meaningful, thoughtful change.

Looking at her field of cardiothoracic anesthesia in particular, Dr. Oliver highlighted that it does continue to struggle with diversity and equity, inclusion

and belonging, in particular for women, Black and African Americans, those of Latinx descent, and Native Americans. “For example, despite medical school classes being approximately 50% male and 50% female for about two decades, women comprise roughly 30–35% of anesthesiologists,” she said. “The same percentage is roughly true in cardiac anesthesia over the same time period.”

Looking at data from the Accreditation Council for Graduate Medical Education, African Americans comprise about 2–3% of all cardiothoracic anesthesia fellows, despite the Black American population being roughly 12–13% of the US population, noted Dr. Oliver. “What is alarming is that these percentages are not increasing, despite women being 50% of the US population (and 50% of the US medical school population), and despite clear data that by 2060 the United States will be majority non-Caucasian.

Drs. Ngai, Sumler, Capdeville and Oakes captured these stagnant numbers in their 2022 papers.^{6,7}

The reasons why women and underrepresented minorities face persistent inequity in terms of representation and parity in power is multi-factorial, stressed Dr. Oliver. “There are terrific texts that describe these more completely and more effectively than I will be able to do in a brief talk, but I will acknowledge that since the dramatic uptick in DEI offices and initiatives, which many cite as originating during the year of the first wave of

COVID-19, and coalescing

“We have reached a point where there is increasingly vocal skepticism about what DEI intends to do, to whom, and to what end.”

Ashley P. Oliver

around broader social movements that included #MeToo and #BlackLivesMatter, we have reached a point where there is increasingly vocal skepticism about what DEI intends to do, to whom, and to what end.

“Some of this skepticism comes from within our own fields, and some comes from broader segments of society, which has been grappling with how to handle race, gender and equity from the perspectives of education and opportunity for many generations.”

In reality, the benefits of DEI are manifold, both in terms of physician wellbeing (and protection of the field itself), and patient outcomes, continued Dr. Oliver. “There is no doubt at this point that companies and institutions that have been able to attain diverse, integrated, equitable communities of workers are more creative, more productive, show lower rates of burnout, and lower rates of turnover,” she said.

“In medicine, medical students – regardless of their own gender or racial/ethnic identity – who have been exposed to other learners of diverse backgrounds are better able to care for all patients, but especially for vulnerable patients, or patients who belong to racial/ethnic minorities. To invest in DEI is to invest in quality care for all patients.”

In terms of ‘reevaluating DEI in a changing landscape’ – the title of Dr. Oliver’s talk – her approach will be multi-faceted. Part of the puzzle will be to expand the horizon wherein we place a discourse on DEI. “One way I do this is through sharing part of my own narrative as the daughter of two physicians: a Black American man whose father’s great aunt was a conductor in the Underground Railroad, and a Jewish American woman whose grandparents came to the United States seeking refuge from oppression in Eastern

“To invest in DEI is to invest in quality care for all patients.”

Ashley P. Oliver



Europe in the early years of the twentieth century,” she said.

“In this broader horizon, what has been called DEI since 2020 is actually the continuation of critical work to understand how differing groups of people may come together with mutual respect and in shared power to promote a larger project. In this case, it means to be practitioners and leaders in the field of medicine and surgery.”

As Dr. Oliver recounted, suddenly in 2020–2021, DEI offices and officers peppered the medical landscape, especially in academic medicine. Almost instantaneously, however, there was critical language against DEI initiatives, even from groups that benefitted from improvements in workplace culture and tolerance due to DEI activities. “Some states (Florida, Texas, North Carolina) have or will introduce legislature that seeks to permanently halt or undo work that has been under the banner of DEI,” she said.

“I have been intrigued by this resistance to DEI, especially as the literature in support of DEI is so overwhelmingly compelling. To that end, I will make the argument that, uncomfortable as it is to engage with critiques of DEI, if we seek a deeper change (and we should seek this deeper change!), we must be willing to broaden our coalition by initiating difficult conversations with those amongst us who do not agree with us.”

A second critical message will be to engage

“Investing in an intersectional discourse that makes space for multiple, overlapping but non-identical perspectives is likely to confer dramatic effects in improving equity in perioperative cardiovascular medicine.”

Ashley P. Oliver

our intersectionality to our advantage, and to celebrate the contributions of groups like the WTS. “Women in medicine have made significant gains since the 1970s when my mother was a medical

student in Boston, Massachusetts. Special interest groups such as WTS are a large part of this. We can look at the success of groups like WTS, and the more recently founded Women in Cardiothoracic Anesthesia (WICTA) for clues about ways to make impactful change and improve DEI in our fields.

“Investing in an intersectional discourse that makes space for multiple, overlapping but non-identical perspectives is likely to confer dramatic effects in improving equity in perioperative cardiovascular medicine.”

She concluded: “A third and final message is to provide the audience with practical tools to engage in hosting on-the-ground discourse about DEI in their respective communities.”

References

1. Corsini EM, Olive JK, Antonoff MB. The current status and importance of diversity in cardiothoracic surgery. *Curr Surg Rep*. 2020;8:1-7.
2. Erkmen CP, Ortmeier KA, Pelletier GJ, et al. An approach to diversity and inclusion in cardiothoracic surgery. *Ann Thorac Surg*. 2021;111(3):747-752.
3. Ortmeier KA, Raman V, Tiko-Okoye C, et al. Women and minorities underrepresented in academic cardiothoracic surgery: it's time for next steps. *Ann Thorac Surg*. 2021;112(4):1349-1355.
4. Moon MR. Equal means equal: cardiothoracic surgery in its second century. *J Thorac Cardiovasc Surg*. 2021;161(4):1381-1389.
5. Hamzat I, Fenton D, Saunders M, et al. Workforce diversity in cardiothoracic surgery: An examination of recent demographic changes and the training pathway. *J Thorac Cardiovasc Surg*. 2024;167(2):765-774.
6. Ngai J, Capdeville M, Sumler M, Oakes D. A call for diversity: women and cardiothoracic anesthesiology fellowship education. *J Cardiothorac Vasc Anesth*. 2022;36(1):66-75.
7. Sumler ML, Capdeville M, Ngai J, et al. A call for diversity: underrepresented minorities and cardiothoracic anesthesiology fellowship education. *J Cardiothorac Vasc Anesth*. 2022;36(1):58-65.

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Plenary Session Exhibit Hall FG Monday 7:30 AM

Nivolumab trials for early non-small cell lung cancer

This morning will see Jarosław Kuźdżał, Head of the Department of Thoracic Surgery at the Jagiellonian University Collegium Medicum (Kraków, Poland), give a surgeon's take on the important CheckMate 77T study. This is a randomized, double-blind, Phase III study in resectable stage II–IIIb non-small cell lung cancer (NSCLC). A thoracic surgeon with 38 years of professional experience, Dr. Kuźdżał relayed that most of the principal investigators in the CheckMate 77T study are medical oncologists. "I am one of the few surgeons among them," he said. "And my team also recruited one of the largest groups of patients into this study."

The CheckMate 77T study, sponsored by Bristol

"We expected a benefit from perioperative nivolumab, but it is the first time such an effect has been shown in a large, randomized trial."

Jarosław Kuźdżał

Myers Squibb, investigates the use of nivolumab perioperatively. "It is mainly an oncological trial, assessing immunotherapy with nivolumab," Dr. Kuźdżał said in conversation with *AATS Daily News*. "Nevertheless, as nivolumab was used preoperatively in this trial, there are surgical aspects I will talk about."

Specifically, the study assesses the efficacy of perioperative nivolumab and chemotherapy. It compares neoadjuvant plus adjuvant nivolumab with placebo in patients who received neoadjuvant chemotherapy and curative-intent surgery, said Dr. Kuźdżał. The combinations are neoadjuvant nivolumab plus chemotherapy followed by surgery and adjuvant nivolumab, and neoadjuvant placebo plus chemotherapy followed by surgery and adjuvant placebo.

Immunotherapy – of which nivolumab is one example – is currently the most promising modality to treat lung cancer (and many other malignancies, too). "Numerous drugs affecting immune response are being investigated in various clinical scenarios," explained Dr. Kuźdżał. The number of ongoing studies on immunotherapy is immense too – it's just

impossible to refer to all of them, he said.

"From the CheckMate 816 study we know that nivolumab is highly effective in a neoadjuvant setting," he added. CheckMate 816 is a randomized, open-label, Phase 3 neoadjuvant study of nivolumab plus ipilimumab or nivolumab plus chemotherapy versus chemotherapy alone in early-stage NSCLC.

Dr. Kuźdżał will outline what was learned from the 77T study. "Nivolumab demonstrated statistically significant and clinically meaningful improvement in event-free survival, with a hazard ratio of 0.58," said Dr. Kuźdżał. The first results of CheckMate 77T were presented to the medical oncology community by Tina Cascone, Associate Professor in Thoracic/Head and Neck Medical Oncology at the MD Anderson Cancer Center (TX, USA) during the conference of the European Society for Medical Oncology in Madrid last year.

Dr. Kuźdżał said the text – soon to be published in the *New England Journal of Medicine* – is encouraging. "We expected a benefit from perioperative nivolumab, but it is the first time such an effect has been shown in a large, randomized trial," he said. "This treatment may be a new standard of care in NSCLC."

Whether nivolumab will be available in standard clinical practice will depend on approval by agencies such as the US Food and Drug Administration and the European Medicines Agency, he added. "Results of studies like CheckMate 77T are the basis for new amendments of clinical practice guidelines, and I believe that perioperative nivolumab will soon be included in such documents," he added.

In patients with cancer progression during the neoadjuvant phase who ended up not undergoing surgery, the benefit was less pronounced than in those who completed the whole treatment. "However, even in this subgroup, we have shown better event-free survival and time to distant metastasis compared with placebo," he added. "Nivolumab added to surgery in stage II–III lung cancer patients does not impact surgical feasibility, and results in a meaningful improvement of treatment results."

Conducting a global randomized trial including hundreds of patients is always a great challenge. "This is a question of organization and resources," he explained. From a medical point of view, trials on immunotherapy, even those including surgery as part of the treatment protocol, tend to be less challenging because of the relative safety of immunotherapy, said Dr. Kuźdżał. "The main challenge will be the development of our understanding of the tumour-related immune



"This treatment may be a new standard of care in non-small cell lung cancer."

Jarosław Kuźdżał

mechanisms and introduction of new targeted drugs," he explained.

As such, more cross-fertilization between specialties is required. "I would encourage my colleagues in the surgery community to promote closer and closer cooperation with medical oncologists and radiation oncologists," said Dr. Kuźdżał. "Today, multidisciplinary treatment is the only way (besides primary prevention and effective screening) to improve the cure rate of patients with lung cancer."

References

1. Cascone T, Provencio M, Sepesi B, et al. Checkmate 77T: A phase III trial of neoadjuvant nivolumab (NIVO) plus chemotherapy (chemo) followed by adjuvant nivo in resectable early-stage NSCLC. *J Clin Oncol*. 2020;38(suppl):TPS9076-TPS9076.
2. ClinicalTrials.gov. Nivolumab Plus Ipilimumab or Nivolumab Plus Chemotherapy Versus Chemotherapy Alone in Early-Stage Non-Small Cell Lung Cancer (NSCLC; CheckMate 816). Available at: <https://clinicaltrials.gov/study/NCT0298528>; accessed April, 2024.



AATS Foundation events on Saturday at the AATS 104th Annual Meeting



AATS/CHSS Summit: Hypoplastic Left Heart Syndrome Room 716 Saturday 1:30 PM

HLHS ‘pearls’ from the past to use in the future

On Saturday, Emile Bacha outlined his own pearls of wisdom on hyperplastic left heart syndrome (HLHS) – a rare congenital heart defect with significant infant and childhood mortality. Dr. Bacha is a US board-certified cardiothoracic surgeon with a sub-specialization in pediatric cardiac surgery, and is currently a tenured Professor of Surgery at Columbia University, Chief of the Division of Cardiac, Thoracic, and Vascular Surgery at New York-Presbyterian/Columbia University Medical Center, and Director of Congenital Heart Surgery at NYP/ Morgan Stanley Children’s Hospital and Komansky-Weill-Cornell Children’s Hospital, New York, NY, USA.

To capture some of the key messages from his talk, Dr. Bacha sat down with *AATS Daily News* to discuss the past, present and future of this challenging condition.

What does the prognosis for HLHS look like in 2024? Have there been improvements in recent decades due to advances in intensive care, surgical techniques, and the introduction of procedures like the Norwood, Glenn, and Fontan operations?

The prognosis for HLHS patients has indeed improved remarkably over the last several decades, both from a survival standpoint, and a quality-of-life and neurodevelopmental standpoint. The key developments since the Norwood operation in the early 1980s have been better intensive care (generally speaking), better cardiopulmonary bypass and myocardial protection techniques, the development of the right ventricle to pulmonary artery (RV-PA) conduit as a source of pulmonary blood flow, the development of the Hybrid Stage I concept, and most recently the transcatheter

Stage I operation. As such, one-year survival has increased from 60% to around 80%.

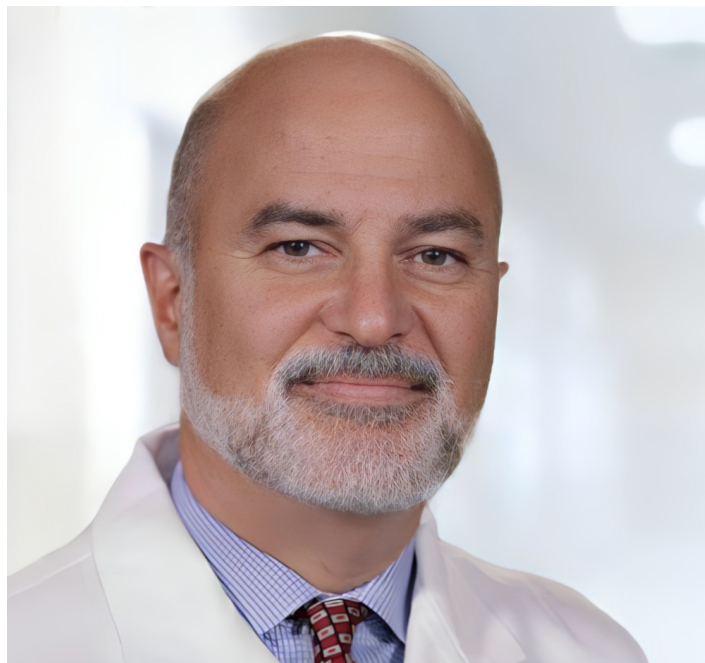
Are there still challenges regarding long-term survival and quality of life that researchers are working to address through innovative approaches?

Absolutely. As you can see from the survival numbers – which don’t even take into account neurodevelopment – this remains a challenging diagnosis. Apart from primary or secondary heart transplantation – a challenge in itself, due to a very limited number of donor hearts – the three surgical stages of Norwood, Glenn and Fontan are still the only way to manage this challenging entity.

A lot of work is being done on many fronts such as better mechanical support systems (single ventricle assist devices), xenotransplantation (to deal with the shortage of organs), improving non-surgical techniques for the first stage (which may render the second stage all the more challenging), stem-cell implantation, and better medications.

Your talk at the Annual Meeting started with a look into the past. What are some of the key ‘pearls’ that should be protected as we continue treatment of HLHS? And what gaps remain?

Again, surgical techniques have significantly improved survival for HLHS patients over the past few decades. However, long-term outcomes and quality of life remain challenges that need to be addressed. The best long-term outcomes and best quality of life result from a perfect operation and an uncomplicated ICU stay. Our understanding of risk factors has also evolved, and some of these risk factors are non-modifiable, such as



“Apart from primary or secondary heart transplantation ... the three surgical stages of Norwood, Glenn and Fontan are still the only way to manage this challenging entity.”

Emile Bacha

low birth weight, genetic syndromes, extracardiac malformations, etc.

While the genetic causes of HLHS have not yet been identified, are there gender disparities in HLHS outcomes, with some evidence that females have higher surgical mortality rates after the Norwood procedure?

Definitely. This is a very important and intriguing area. Most surgeons (I know for sure myself) do not know or remember the sex of the baby they are going to do a Norwood procedure on. So, while the idea of a bias may be far-fetched, there is a lot more to understand in this burgeoning field.

As survival has improved, is there also a lot more to understand in terms of data on long-term outcomes and quality of life for HLHS patients into adulthood?

We now have HLHS patients who are young adults, and most have some liver dysfunction due to Fontan physiology. Thus, HLHS palliation as practiced currently is truly a mid-term palliation at best. We will have to come up with better ideas and solutions, ideally moving away from Fontan physiology which is deleterious in the long term.

For instance, there is an ongoing

“In our hands, the valved RV-PA conduit is a great technique and ensures very stable cardiac physiology after surgery. However, better outcomes in higher-risk patients remain elusive.”

Emile Bacha

prospective and randomized National Institutes of Health-supported trial of stem-cell therapy in HLHS across multiple institutions.

What other aspects are important to discuss?

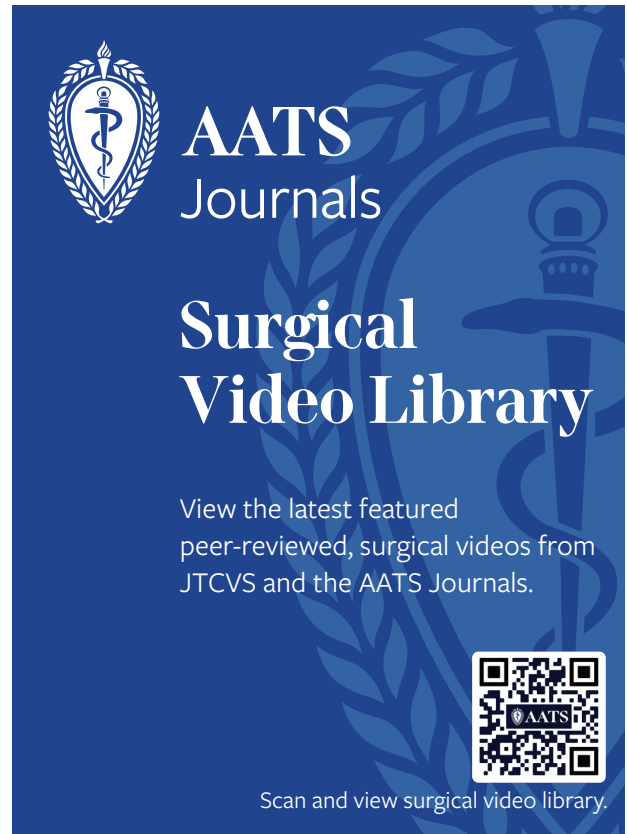
One aspect is that the volume–outcome relationship has been firmly established for the Norwood operation – true for both institutional volumes and surgeon volumes. Not all pediatric surgeons will perform it, so I believe it has become a sub-sub-specialization if you will.

Do you have a take-home message for the AATS Daily

News audience?

During my own >25-year career, I have noticed a marked improvement in overall outcomes for the Norwood procedure in low-risk patients – or perhaps we should call them ‘normal-risk’ patients, since no Norwood case is ever truly low-risk! We now routinely close the chest after surgery instead of doing a delayed chest closure, which used to be universal a decade or so ago.

In our hands, the valved RV-PA conduit is a great technique and ensures very stable cardiac physiology after surgery. However, better outcomes in higher-risk patients remain elusive.



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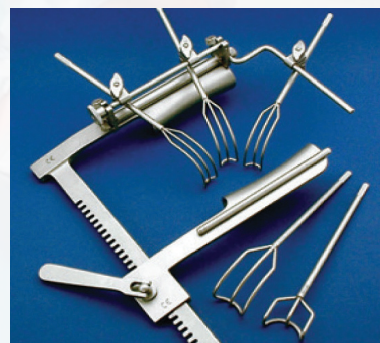
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Perioperative Care Scientific Session: What Happened to TEAMSTEPS? Room 714 Sunday 1:30 PM

Is the weekend effect real?

The impact of holiday and weekend cardiac surgery on failure to rescue (FTR) was dissected on Sunday afternoon by Skylar Rodgers, a general surgery resident at the University of Mississippi, currently in her first of two dedicated research years at the University of Virginia Cardiovascular Research Center, Charlottesville, VA, USA.

The effect of weekend surgery still shows mixed results in the wider literature. On the one hand, patients undergoing emergency or urgent cardiothoracic surgery on the weekend appear to have higher 30-day mortality compared to those operated on during a week day,^{1,2} but the impact on elective procedures and post-discharge outcomes is more mixed, and would appear to require further study to fully understand.^{2,3}

“Many studies have suggested that weekend surgery is associated with higher rates of mortality and complications,” said Dr. Rodgers. “However, patients who require weekend operations often present with increased acuity and increased illness severity than those who undergo surgery during the work week. To accurately compare these two inherently different populations, appropriate clinical risk adjustment must be utilized.”

Discussing her work in this arena, Dr. Rodgers detailed her study of data from 23,139 adult patients who underwent cardiac operations between 2018 to 2023 at 17 different surgery programs affiliated with the Virginia Cardiac Services Quality Initiative. Only Society of Thoracic Surgeons (STS) index operations for

“Patients who require weekend operations often present with increased acuity and increased illness severity than those who undergo surgery during the work week.”

Skylar Rodgers



which preoperative risk scores are available were included (coronary artery bypass grafting [CABG], aortic valve replacement ± CABG, mitral valve repair or mitral valve replacement ± CABG).

“For this study, we defined weekend operations as cases with a start time after 6 PM on Friday, with a cut-off of 6 AM on Monday,” said Dr. Rodgers. “We defined holidays relatively conservatively and included nine major United States federal holidays during which staffing would likely be lower.

“The primary outcome of interest was FTR, defined by the STS as operative mortality after one of the following complications: prolonged ventilation, unplanned reoperation, stroke, or renal failure. The incidence of deep sternal wound infection was low, and excluded from our analysis.”

As Dr. Rodgers described, risk was adjusted using a hierarchical logistic regression model utilizing the hospital as a random effect. The authors adjusted for preoperative factors (pre-operative dialysis, pre-operative circulatory support device use, predicted risk of mortality/major morbidity) and intraoperative factors (cardiopulmonary bypass time, red-blood-cell transfusion requirement) that differed between the groups to account for differing illness severity and intraoperative complexity between the groups.

In a nutshell, the results showed that patients who underwent holiday or weekend surgery presented with greater severity of illness, and were more likely to require urgent or emergent operations. “As expected, these patients had

higher unadjusted rates of complications, mortality, and FTR,” noted Dr. Rodgers.

“After risk adjustment, we found that patients who underwent cardiac surgery on holidays or weekends still experienced higher rates of FTR complications (re-operation, post-operative renal failure, post-operative stroke, prolonged ventilation). However, we were surprised to find that these patients who underwent holiday or weekend surgery actually had similar FTR rates to those that underwent operations during the work week, after risk-adjustment.

“We chose FTR as our primary outcome specifically because it is an indicator of institutional management of complications and represents an opportunity for intervention.”

Dr. Rodgers offered her closing thoughts: “Our data suggests that although holiday or weekend cardiac surgeries have significantly higher FTR complication rates, FTR rates are similar to weekday cardiac surgeries. This suggests that hospital systems can identify and address complications effectively regardless of operative timing.”

References

1. Matsui H, Oshima Y, Nomura Y, et al. Seven-day services in surgery and the “weekend effect” at a Japanese teaching hospital: a retrospective cohort study. *Patient Saf Surg.* 2020;14:20.
2. Zare MM, Itani KM, Schiffner TL, et al. Mortality after nonemergent major surgery performed on Friday versus Monday through Wednesday. *Ann Surg.* 2007;246(5):866–874.
3. Sanaïha Y, Ou R, Ramos G, et al. Day of Discharge Does Not Impact Hospital Readmission After Major Cardiac Surgery. *Ann Thorac Surg.* 2018;106(6):1767–1773.

“Although holiday or weekend cardiac surgeries have significantly higher FTR complication rates, FTR rates are similar to weekday cardiac surgeries. This suggests that hospital systems can identify and address complications effectively regardless of operative timing.”

Skylar Rodgers

SESSION HIGHLIGHT

Don't miss Monday's Plenary Sessions!



Rosemary F. Kelly

Plenary Session

7:30–9:30 AM, Exhibit Hall FG

MODERATORS

Rosemary F. Kelly University of Minnesota

David R. Jones Memorial Sloan Kettering Cancer Center

PRESENTATIONS

243. Evolving Concern: Late Outcomes after Arterial Switch Operation for Complete Transposition of the Great Arteries

- Commentator: Emile Bacha, Columbia University Pediatric Research Fund
- Abstract Presenter: Rodolfo Rocha

244. Bridging to Heart Transplantation using Either Temporary or Durable Mechanical Circulatory Support: Does Blood Type and Body Size Matter?

- Commentator: Ashish Shah, Vanderbilt University
- Abstract Presenter: Taylor Nordan, Brigham and Women's Hospital



David R. Jones

68. Disease characteristics and treatment outcomes in patients with resected early-stage ALK+ non-small cell lung cancer from ALINA, a phase III randomized trial of adjuvant alectinib vs. chemotherapy

- Commentator: Brendon Stiles, Montefiore Medical Center
- Abstract Presenter: Yi-Long Wu, Guangdong province people's hospital

New Member Induction

AATS Awards | Resident Poster and Case Report Competitions & C. Walton Lillehei Resident Forum

AATS Lifetime Mentorship Award

AATS Lifetime Achievement Award

LB8. Surgical Outcomes With Perioperative Nivolumab (NIVO) in Patients (Pts) With Resectable NSCLC From the Phase 3 CheckMate 77T Study

- Commentator: Valerie Rusch, Memorial Sloan Kettering Cancer Center
- Abstract Presenter: Jarosław Kuźdzał, Jagiellonian University

Basic Science Lecture: Your Microbiome is Your Future

- Guest Lecturer: Stanley Hazen, Cleveland Clinic



Lars G. Svensson

Presidential Plenary Session

9:45 AM–12:00 PM, Exhibit Hall FG

David J. Sugarbaker Memorial Lecture: A Surgeon's Journey: Following the Science to the Development of Impactful Therapeutics

- Guest Lecturer: Patrick Soon-Shiong, Executive Chairman, ImmunityBio, Chan Soon-Shiong Family Foundation

Presidential Address Introduction

- Speaker: David R. Jones, Memorial Sloan Kettering Cancer Center

Presidential Address: Raison d'être in Turbulent Times: Academics, Legerdemain Surgery, and a Leadership Theorem

- Speaker: Lars G. Svensson, Cleveland Clinic



Plenary Session Exhibit Hall FG Monday 7:30 AM

Lifelong implications of the arterial switch operation: a 30-year follow-up study

Long-term survival after the arterial switch operation (ASO) for complete transposition of the great arteries (TGA) will be presented by Rodolfo V. Rocha, a cardiac surgery resident within the Division of Cardiovascular Surgery at the University of Toronto (Ontario, Canada). “TGA encompasses 5% of all congenital heart diseases, and is mostly fatal in newborns, unless a surgical repair is performed,” Dr. Rocha told *AATS Daily News*.

ASO, the most common surgical technique to repair babies with TGA, became popular in the mid-1980s. More recently, patient survival post-TGA repair with the ASO has been transformed, reaching 98% survival. “Over the past few years, this particular population of patients born with TGA that underwent an ASO during the first months of life are now reaching adulthood,” said Dr. Rocha.

Despite the success of TGA repair, new questions have emerged from this specific population. “What is the lifelong implication of some of the surgical techniques performed during the ASO, such as coronary transfer, creation of a neo-aortic root, and translocation of the pulmonary arteries?” asked Dr. Rocha. To answer that, the researchers wanted to understand what happened to the entire population of babies born with TGA post-surgical repair over 30 years.

That, however, posed a challenge. “So many teenagers and young adults that underwent an ASO are ‘lost to follow-up’ at their congenital heart center. It is something that happens in most centers in the world,” commented Dr. Rocha. As such, any long-term study would need to minimize the loss of follow-up.

Collecting sufficient data on this population is difficult too, because when the technique first became available, it was only performed at a limited number of centers worldwide. “Few centers have a large enough population of young adults post-ASO to evaluate and make any meaningful conclusion about their

status,” he explained.

Dr. Rocha focused his study on the long-term survival of a group of patients operated for TGA repair at the Hospital for Sick Children (SickKids) in Toronto. His group was able to study 838 patients who had a surgical repair of TGA since 1990, with 791 undergoing an ASO. “This is a large number of patients – in fact one of the highest single-center surgical volumes in the world,” said Dr. Rocha. Because the Cardiac Surgery Division at SickKids started a comprehensive database (CCSdb) in the 1960s, the researchers have also had access to detailed information regarding babies’ demographics, primary and secondary diagnoses, variables pertinent to each repair type including coronary artery patterns, primary and secondary operation, in-

“The international community must pay close attention to cardiac lesions that may require surgical re-intervention.”

Rodolfo V. Rocha



hospital survival, institutional follow-up, and re-operations.

Despite this quantity of good data, Dr. Rocha and his team still had to solve the problem of patients lost to follow-up. “To overcome this limitation, we linked the SickKids CCSdb to multiple provincial administrative databases housed by the Institute for Clinical Evaluative Science (ICES),” he recounted. Every Ontarian health care interaction is recorded at ICES, allowing them to determine accurate patient survival and reoperation rates based upon 98.8% follow-up out to 32.7 years post repair, he explained.

As a result, this is the most complete single-center study to date on ASO outcomes at 30 years, said Dr. Rocha, and the results were insightful. “Survival post-ASO is excellent, with 30-year survival greater than 92%, and in-hospital outcomes have improved dramatically, particularly since 1998,” he added. The researchers also found that isolated ventricular septal defect (VSD), which is an associated defect that may occur in babies born with TGA, is not a risk factor for mortality.

However, they did find that TGA with a specific coronary pattern (single coronary artery arising from sinus 2) carries a significant risk of in-hospital death. This was surprising, stressed Dr. Rocha. So was the increased rate of aortic valve re-interventions starting to rise post 15 years of follow-up? “Aortic re-interventions occur late and appear to be a rising hazard at >15 years, which is a concerning finding as the population ages,” he said. “This is a relatively novel finding compared to what has been published before, with only a couple of similar reports from other centers worldwide – likely due to our longer follow-up time.”

With a higher sample size (185 patients deemed at-risk at 25 years of follow-up), they were able to observe how aortic valve lesions become clinically important to initiate re-intervention. In contrast, when aortic valve insufficiency and aortic root dilation had been reported in

the literature, most lesions did not require surgical repair.

What the study signals, therefore, is the need for lifelong surveillance, as patients may require surgical interventions even after 20 years post-TGA repair. “In addition, further improvement in outcomes post-ASO may depend on technical intra-operative details of coronary artery transfer to ensure unobstructed flow, while avoiding distortion of the aortic root,” said Dr. Rocha.

Dr. Rocha will compare the long-term outcomes following TGA repair as reported in worldwide studies. That includes Zhu et al.¹ who also reported at the AATS 103rd Annual Meeting last year that the need for neo-aortic valve or root reoperation surpasses 10% by 30 years post-ASO. “The need for re-interventions (both early and late) after repair opens the doors to investigate reasons for why cardiac lesions became significant enough to warrant an additional cardiac procedure,” he said.

“Once these reasons and their pathophysiology are well-

understood, the cardiac surgery/ cardiology community may propose strategies to address them.” Indeed, Dr. Rocha suggested modification of current repair techniques, closer surveillance, or better medical treatment.

Meanwhile, Dr. Rocha urged the congenital cardiac surgery and cardiology community worldwide to follow all patients post-TGA repair. “The international community must pay close attention to cardiac lesions that may require surgical re-intervention,” he said. “With a larger number of post-TGA repair patients reaching adulthood, we need to evaluate if the outcomes observed in our study also occur in patients operated on in other parts of the world.”

“We may also seek to understand better the mechanisms that make these lesions serious enough to require surgery.”

References

1. Zhu MZL, Fricke TA, Buratto E, et al. Outcomes of neo-aortic valve and root surgery late after arterial switch operation. *J Thorac Cardiovasc Surg.* 2024;167(4):1391-1401.e3.



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Thoracic Scientific Session: Education Start to Finish Room 802 Monday 1:30 PM

Leadership roles: who gets them?

Championing leaders with integrity will be the focus this afternoon of Thomas A. D'Amico, the Gary Hock Endowed Professor, Chief of General Thoracic Surgery, and Director of the Thoracic Oncology Program of the Duke Cancer Institute at Duke University (Durham, NC, USA).

Importantly, Dr. D'Amico has been a training program director for approximately 20 years, being intimately involved in choosing and developing those leaders who will then practice independently. "I think it's recognized that we've had good success in not only training successful surgeons, but successful people that go into leadership positions elsewhere," he told AATS *Daily News*. As Chair and Course Director of the AATS Leadership Academy, Dr. D'Amico has come across many future leaders. That puts him in a great position to detail how he evaluates people for their residency and leadership potential, how they should be trained, and when and how to develop leadership over time.

Importantly, this afternoon he will highlight the huge issue of underrepresentation of women and minorities in leadership positions. "It severely hurts our specialty," he said.

Changing the makeup of conference panels at scientific meetings is one way forward, said Dr. D'Amico. One paper¹ on gender inequity at national and regional cardiothoracic surgery meetings found that of 20 meetings and 3,662 session leaders, just 13.1% were women. In another paper,² only 17% of cardiothoracic faculty were women, compared with 27% of surgical faculty. Indeed, looking at cardiothoracic trainees, 24% are women, compared with 36% of surgical residents and 46% of all residents, noted Dr. D'Amico.

To that end, he will outline how he chooses future leaders. "What are the features that would make someone a good candidate to be in our residency?" he asked. "What leadership qualities do I look for? What about once they're in the program: how do we foster

leadership? If they come into my program as my own faculty, how do I take them from junior surgeons in thoracic surgery to leaders themselves?"

By the time physicians reach the thoracic training program, they will have usually completed seven to ten years of training, and may have other significant accomplishments to their name. Nevertheless, Dr. D'Amico looks for very specific traits of leadership: "Are they interested in academia? Are they willing to work as a team? Do they have the ethical values of leadership?" he said. "If I only selected for ambition and track record, I may get people that don't have the ethical values that I think

are important."

Specifically, Dr. D'Amico looks for so-called 'servant leaders' – those who have integrity, accountability, and honesty. "It's easy to see that someone's had 27 publications, been the leader of this-and-that, and has come complete with letters of recommendation that say they're a future star in thoracic surgery," he stressed. "I want future stars to be ethical, have integrity, to be accountable, to be honest, and to be strong team members."

Applications with glowing qualifications, evidence of publications, exam results and recommendations are therefore only a piece of the leadership pie, said

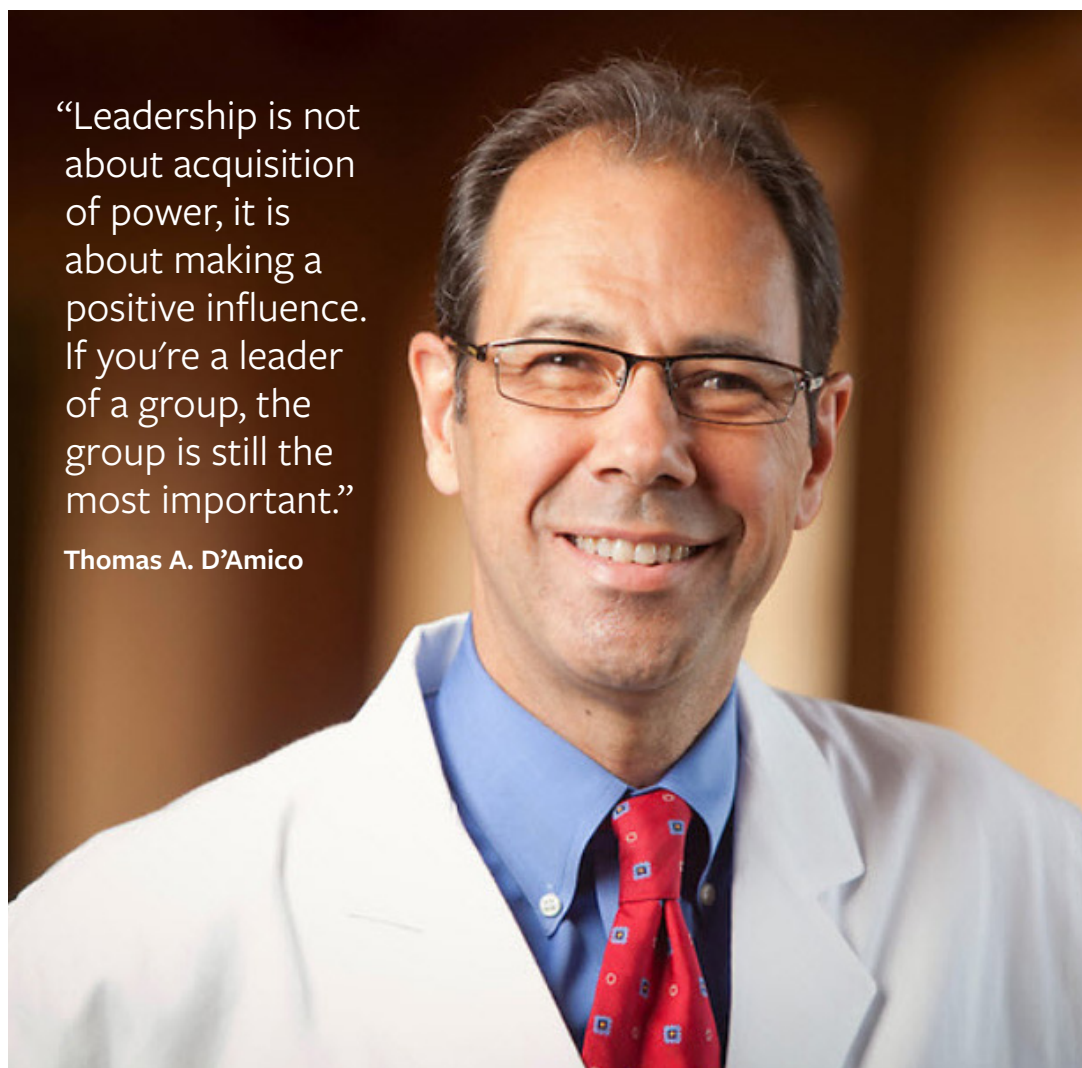
Dr. D'Amico. "The important part for me is the interview itself – that half hour that I have with the applicant," he said. "How did they impress me in their responses to my questions, and what do I think of them and their future?"

He added: "Somebody may have 50 publications, but if I grade them lower in character and integrity, they're not going to make it to the top of my list."

Once accepted into the program, candidates are of course given training to develop important traits. "Together with my entire faculty we hone and develop those values," he said. That means leading by example, and including regular

"Leadership is not about acquisition of power, it is about making a positive influence. If you're a leader of a group, the group is still the most important."

Thomas A. D'Amico



discussions about accountability and integrity. Then, candidates are given opportunities for leadership, starting with smaller roles first. Ultimately, they are helped to reach the highest possible levels of leadership responsibility, positioned as people who make important decisions and set important goals.

The servant-leader mindset is extremely important, says Dr. D'Amico. "That means you've demonstrated that you have the qualities to be a leader, but then your goal should be how to make things better for the other people around you. How do you make their jobs better? How do you improve their opportunities? Unfortunately, I've known people in leadership positions where their goals are to accrue as much power, to make as much money, and to create as much importance for their own role as possible."

Within the program there are weekly- to monthly meetings, along with a set curriculum, but teachers also have time and space to develop specific traits with the residents.

"I want future stars to be ethical, have integrity, to be accountable, to be honest, and to be strong team members."

Thomas A. D'Amico

"Our goal is to teach them how to make decisions, including surgical choices, how to talk to family members, and whether to operate or not," he said.

Looking at the wider picture, there are many paths to be taken on the journey to becoming a better leader. Mentorship is extremely important, for example. "You're not going to go from where you started to a real leader without someone above you, helping guide you on the way. Whether they're a sponsor or mentor, you need someone who can help you analyze, make hard decisions, and

look for opportunities," reasoned Dr. D'Amico.

Reiterating the importance of servant-based leadership, he concluded: "Leadership is not about acquisition of power, it is about making a positive influence. If you're a leader of a group, the group is still the most important."

References

1. Shemanski KA, Ding L, Kim AW, et al. Gender representation among leadership at national and regional cardiothoracic surgery organizational annual meetings. *J Thorac Cardiovasc Surg.* 2021 Mar;161(3):733-744.
2. Ortmeier KA, Raman V, Tiko-Dkoye C, et al. Women and Minorities Underrepresented in Academic Cardiothoracic Surgery: It's Time for Next Steps. *Ann Thorac Surg.* 2021 Oct;112(4):1349-1355.

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