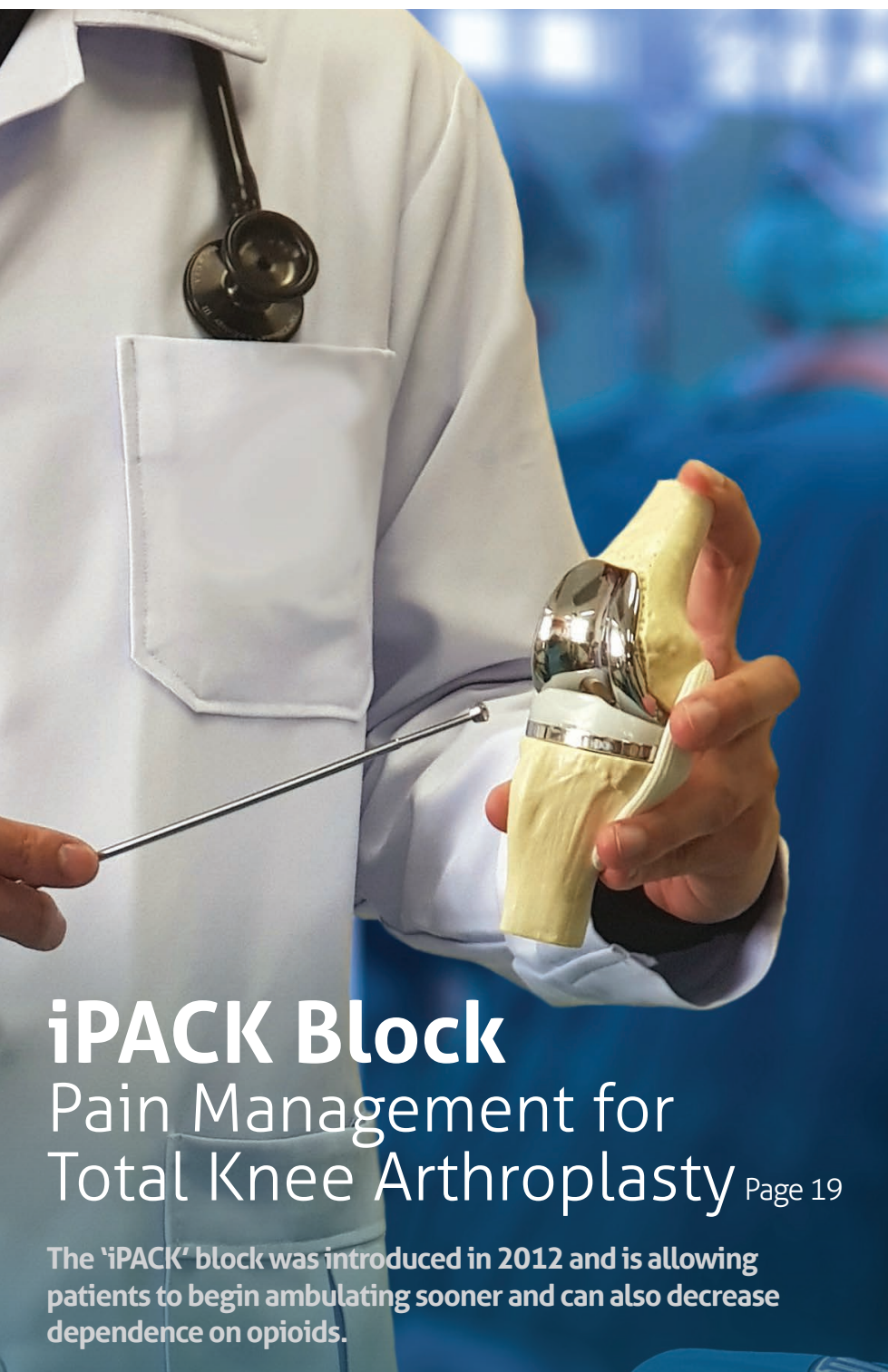


The Sensor



iPACK Block

Pain Management for Total Knee Arthroplasty

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The 'iPACK' block was introduced in 2012 and is allowing patients to begin ambulating sooner and can also decrease dependence on opioids.

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Understanding Anesthetics

Exploring the Developmental Understanding of Anesthetics from 1844 to the Present.

Member Highlight

Meet Jackie Jackson, Cer.A.T., Certified Anesthesia Technician in the North Carolina area.

Education Director Article

An introduction to a new Anesthesia Technology Program in Pasadena, CA.



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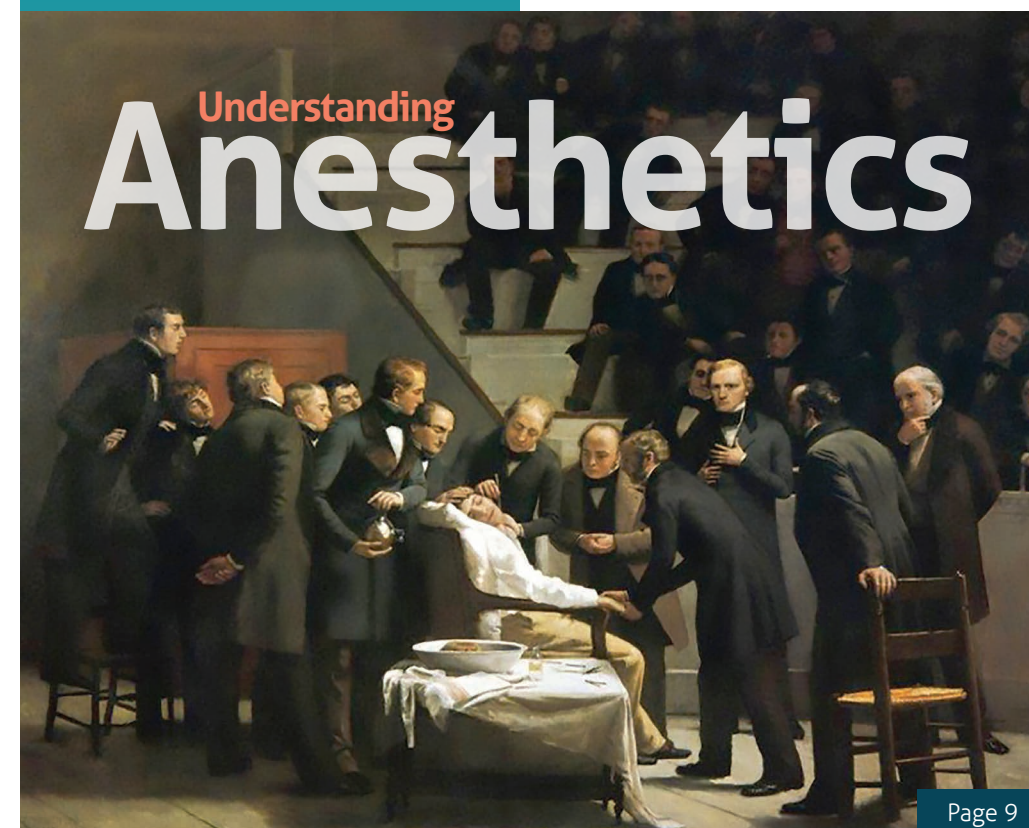
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iPACK Block

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Perspective

PRESIDENT'S LETTER



Greetings Members!

Our times are a-changin'. Our jobs, our profession, the healthcare environment, they are a-changin'. With COVID-19, the times they are a-changin'.

However, working together, with kindness and understanding for each other and dedication to our profession, we will weather the storm.

This year has been an incredibly stressful time for everyone. Some people are able to adapt to the changing stress levels and welcome the challenges. Others struggle. We should all keep a watchful eye on our friends, family and coworkers. If anyone struggles, be there for them. Help them in their time of need.

All of these help us to become better people. Don't give up because times are tough. Rise above. Keep pushing forward. Fight the good fight. This storm will eventually pass. Surviving is only part of your journey. Thriving afterward is equally important.


With our challenges, we have accomplished several things for ASATT membership:

- We have created the first virtual webinar.
- We have approved the first regional educational webinar.
- All regional directors will have at least one webinar per region.
- We have created the first virtual national educational conference providing up to 21 CEs!

Be sure to register for the First ASATT VIRTUAL NATIONAL EDUCATIONAL CONFERENCE!!!

<https://conference2020.asatt.org/>

Be safe, stay healthy, take care yourselves and each other!

Best Regards,
Greg Farmer, Cer.A.T.
ASATT President 

"Iron sharpens iron, so one man sharpens another."

~ Proverbs 27:17 ~

This proverb has many meanings and can be applicable to many times in our lives:

- It can be applied to relationships. Making each other sharper and stronger. Constant improvement.
- It can be applied to accountability. Allowing others to see our weaknesses for improvement.
- It can be applied to motivation. We all have the drive to succeed and to improve.
- It can be applied to willingness. We must allow our friends and family to feel comfortable to show us where we may need to improve.

**"Come gather 'round people
Wherever you roam
And admit that the waters
Around you have grown
And accept it that soon
You'll be drenched to the bone
If your time to you
Is worth savin'
Then you better start swimmin'
Or you'll sink like a stone
For the times they are a-changin'"**

~ Bob Dylan ~

Highlights

SOCIETY NEWS



Regional Meeting

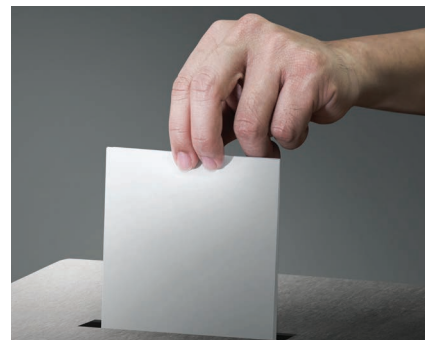
The first Virtual Regional Meeting was held August 9, 2020 for Region 7 – Hawaii, and it was a great success! The meeting was held via Zoom webinar. Many future Regional Meetings will also be held on this platform. Thank you to the 73 attendees who registered for the meeting!

Congratulations to Region 7 Director, Delbert Macanas, and President-Elect, Justin Akamine, who hosted this first Virtual Regional Meeting. Thank you to the speakers and medical students from John A. Burns School of Medicine (JABSOM) for your time and wonderful presentations!

From John A. Burns School of Medicine, we had Mark Guirguis – *Malignant Hyperthermia*, Griffin Lee – *Effects of Anesthesia on the Developing Brain*, Nolween Phan – *Airway Management in the Time of COVID-19*, Darreon Schwartz – *Post-operative Nausea and Vomiting*, Charles (Kawena) Akiona – *Perioperative Management of Methamphetamine*, and Shawn Pak – *Repurposing Anesthesia Machines as*

ICU Ventilators. The two speakers were John Fraizer – *Cerebral and Somatic Tissue Oximetry in Cardiac and General Surgery* and Cindy Ku, M.D. – *Obesity and Anesthesia: Challenges in Non-Operating Room Locations*.

Continue to check out the ASATT website for upcoming Regional Meetings! With the meetings switching to virtual, this is a great opportunity to obtain more CEs and attend a different Regional Meeting. All meetings will be posted under EVENTS, [MEETINGS / EVENTS](#).



2020 Elections

ASATT elections closed Friday, August 14 and our members have spoken. Thank you to all who have participated in voting. We had an impressive group of talented and committed members to vote on for the 2020/2021 term. Stay tuned for the announcement of the 2020/2021 Board at the first Virtual National Education Conference September 11-13, 2020!

Membership Renewal

Don't forget to renew your membership for 2020-2021! Visit the membership

renewal form on the website under MEMBERSHIP before it expires to continue to enjoy member savings throughout the year:

- Discounted fees for the Annual Educational Conference and Regional Programs offered throughout the year
- Discounted registration fees for e-learning webinars and other online offerings
- Reduced recertification application fees
- Quarterly Sensor Magazine
- Monthly *ASATT Update* e-newsletter
- *SENSOR* Quizzes and other ongoing continuing education opportunities
- And so much more!

Remember, ASATT membership is based on a calendar year membership term, which runs from August 1 – July 31 each year.



Virtual National Educational Conference

ASATT will be hosting its first Virtual National Education Conference September 11-13, 2020. Due to the

Affordable DART™ Atomizers

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unprecedented times of the COVID-19 pandemic, all onsite meetings/conference have switched to virtual for the health and safety of our members and leadership. This is a great introduction to online training for those who are new to this learning format. By attending the conference in the comfort of your own home, you can earn up to 21 CEs!

For the first time, ASATT is offering a flat rate for members! Non-member and single day rates are also available. This virtual conference is the most cost effective way to access this level of training. No travel or hotel expenses necessary, and only the same professional information you've come to expect. Live educational sessions via video streaming will allow you to participate by asking questions and

leaving comments. There will even be a virtual exhibit hall to participate in with live video chats with our exhibitors. Check out the [conference website](#) for more details.

Certification

Recertification is coming up! Starting November 1, you can complete the recertification process through December 31. Don't wait until the last minute! Start getting your CEs in order and make sure your membership is current to receive your member benefits. To learn more, visit the [recertification](#) section on the ASATT website as we will update the instructions as the date nears. If you

have questions about how many CEs you have on file with ASATT, please reach out to customer care at customer care@asatt.org or by calling Nicole at 414-908-4942 ext. 116. 



Spotlight

MEMBER HIGHLIGHT



Jackie Jackson, Cer.A.T.

What is your current job title?
Certified Anesthesia Technician.

How many years have you been in the Anesthesia Technology profession?

I have been in the profession for 28 years. I started my career at Cape Fear Valley Hospital in Fayetteville, NC. I worked hard and learned all that I could. In 1996, I sat for my certification and passed. A few months later, I was blessed to start working at UNC Hospitals in Chapel Hill, NC. There I met Alvis Page Cer.A.T., Educator for Anesthesia, and Gail Walker Cer.A.T., Team Leader at the time for the anesthesia technical support team.

They helped me to become the anesthesia technician that I am today. I learned a lot from Gail and Alvis during my 20 years of service at UNC Hospitals.

What do you find most challenging about your job?

Some of the most challenging aspects of my job are dealing with supplies/equipment orders and back orders, making sure that the anesthesia care team has what is needed to provide for our patients, and as an anesthesia technician, making sure that the team knows that they have a skilled and knowledgeable anesthesia technician, a second pair of hands there to help them, as this is the goal that ASATT is built on for all of us as anesthesia technicians.

How many years have you been an ASATT member?

I am one of the original members of the ASATT. I have been a member over 27 years.

What is your fondest memory of ASATT?

I would have to say that some of my fondest memories are from the ASATT educational meetings: networking with other anesthesia technicians from across the United States, meeting others with the same passion as I have for the profession of anesthesia technicians. I have met many that inspire me: Wilma Frisco, Cer.A.T., Sue Christianson, Cer. A.T.T, Gail Walker, MA, Cer. A.T., Director of Anesthesia Technology in Durham N.C., and Alvis Page Cer.A.T., to name a few.

What has been your proudest accomplishment? (Personal life, professional life, or both.)

There are several accomplishments that I am proud of. In 2013, I was nominated as the Anesthesia Technician of the Year by the graduating anesthesiology residents at the University of North Carolina School of Medicine. In 2014, I received the ASATT Region 3 Education Award presented to me during the ASATT National Meeting in New Orleans, LA., and I was named Outstanding Employee for Perioperative Services by the UNC School of Nursing in the same year. I am also very proud of being the preceptor for all newly hired anesthesia technicians at UNC Hospitals. After

retiring with 20 years of service at UNC, I now work for the VA Hospital in Fayetteville, N.C., where I am also a clinical Out of Operating Room Airway Instructor (OORAM) helping to care for our veterans who have always protected and cared for us.

What is your favorite food?

My favorite food is Italian, and I like candy.

You have just won your dream vacation. Where would you go?

Florida. My wife and I love Florida.

People would be very surprised to know that...

I am a cake decorator as well.

What do you enjoy doing with your time?

I like working in my yard and just spending time with my family.


What is your favorite type of music?

I love Motown and old school music.

What is your favorite movie?

Anything on TCM (Turner Classic Movies). I am an old soul.


What would you like to get around to doing one of these days?

Spending time with my family and friends making good memories. That's what is important. Sitting on the beach daydreaming is all I want to do. 

Happenings

ASATT AND RELATED EVENTS


Regional Meetings

As ASATT is making a shift to a virtual Annual Educational Conference in 2020, our Regional Meetings will follow suit. Until we know that we can meet safely in a face-to-face setting, our Regional Directors will be joining in on holding Virtual Regional Meetings. Their goal, as always, is to provide as many educational opportunities each year as possible. Region Seven just hosted the first virtual Regional Meeting and drew 73 attendees from 16 states and 3 countries. As our Regional Directors shore up their plans and set dates, the Virtual Regional Meetings will be posted on the ASATT website and announced via the monthly *ASATT Update*. 

ASATT Annual Educational Conference

ASATT has continuously monitored the COVID-19 pandemic to ensure the safety and well-being of our members, corporate partners and colleagues. The ASATT Board of Directors has determined that we cannot proceed with the 2020 Annual Educational Conference scheduled for September 10-12, 2020 at the Fort Worth Hilton. ASATT will postpone the in-person conference until next year, September 23-25, 2021.

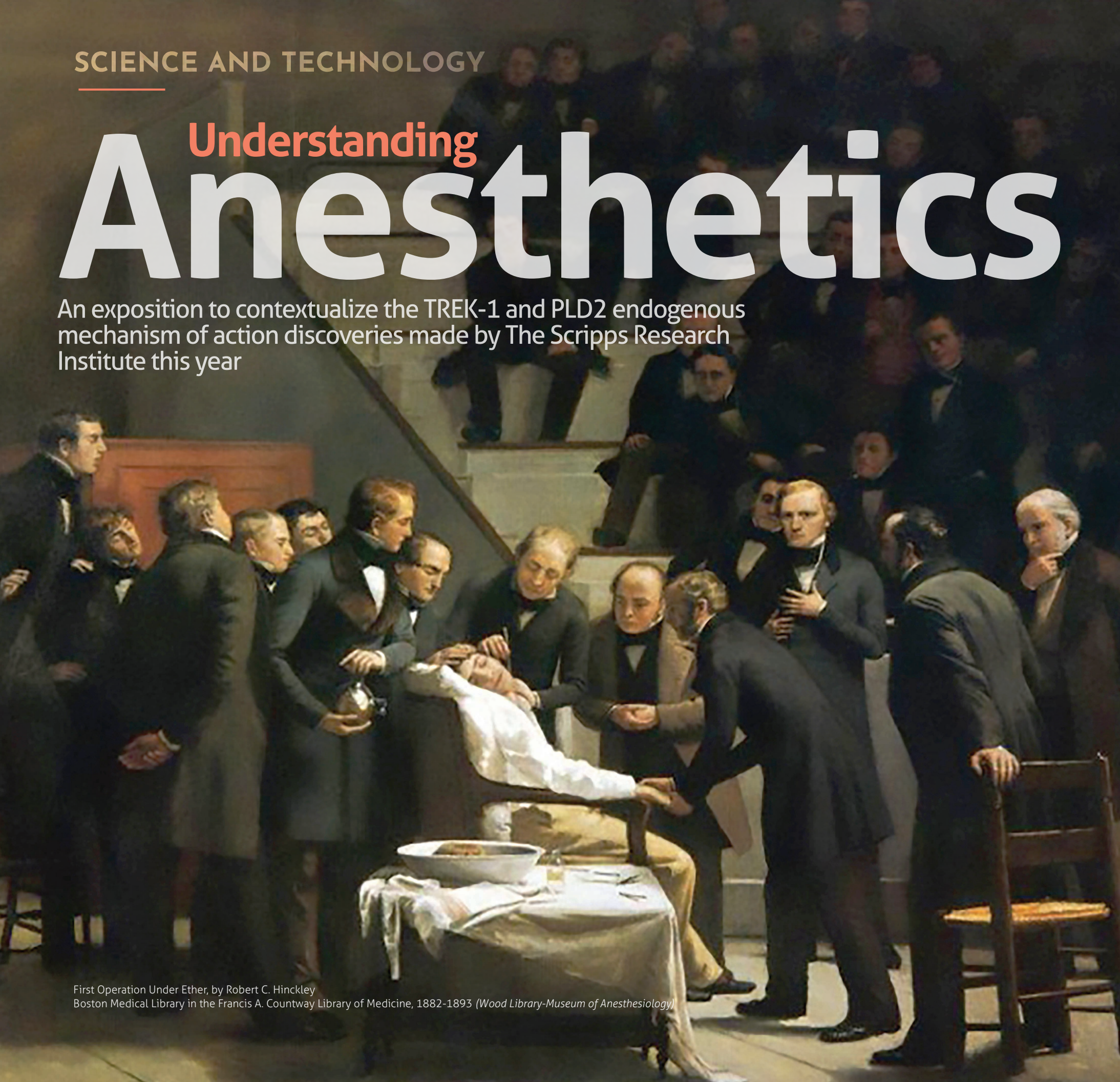
ASATT is proud to announce it's First Virtual Annual Educational Conference scheduled for September 11-13.

The ASATT Board of Directors would like to thank you for your patience and understanding during these unprecedented times and looks forward to your participation in our very first virtual conference! 



Understanding Anesthetics

An exposition to contextualize the TREK-1 and PLD2 endogenous mechanism of action discoveries made by The Scripps Research Institute this year



First Operation Under Ether, by Robert C. Hinckley
Boston Medical Library in the Francis A. Countway Library of Medicine, 1882-1893 (Wood Library-Museum of Anesthesiology)

Exploring the Developmental Understanding of Anesthetics from 1844 to the Present



BRYAN FULTON, BAA, CER.A.T.T.

Introduction

Anesthesia, if broken down into the Greek *anaesthesia*, is a practice that seeks to remove sensation. This banal definition would then classify the basic intoxication of a person as a rudimentary form of anesthesia. On its face, though, it is recognized that anesthesia is nuanced, complex, and focused on adjusting, manipulating, and controlling every facet of a patient's biochemistry, physiology, and generalized structural anatomy. So why begin an article published in an anesthesia technology journal with such an off base simplistic definition? Context. Since the first

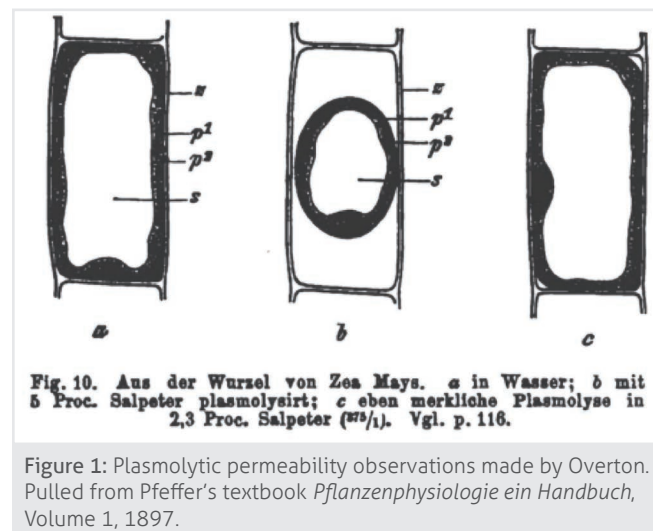
use of ether in Massachusetts, the study of anesthesia has been one of taking gross concepts and reducing them down to their most essential and meaningful function to understand how anesthesia truly works. The purpose of this paper is to practically explain the relation of historical and contemporary understandings of general anesthetics to the novel discovery made this year into the endogenous mechanisms of action at play in inducing unconsciousness—a revelation previously unknown but hotly debated. As will be further explored, you will see that the previous primary understanding of anesthetic action relied on the assumption that the intrinsic hydrophobic quality of anesthetics had an affinity for the brain's hydrophobic lipid brain cells—thus resulting in a state of unconsciousness. For decades, this was the operating understanding of anesthetics. However, today, with advances in research technology and Dr. Richard Lerner's "Hypothesis about the endogenous analogue of general anesthesia" proposed in 1997, contemporary science has moved beyond the Meyer-Overton Correlation of 1899 to understand the actual endogenous mechanism of action of general anesthetics[13][14]. Discoveries made by the Scripps Research Institute and published this year in the Proceedings of the National Academics of Sciences (PNAS) now pinpoint volatile anesthetics' ability to activate TREK-1 channels via the disruption of phospholipase D2 (PLD2) resulting in unconsciousness[13].

Early Understanding of Volatile Anesthetics

The first traditional use of anesthesia occurred in 1844 with the use of Nitrous Oxide by American dentist Horace Wells [1][4]. At the time, nitrous oxide was utilized recreationally, and, on a hunch, Wells assumed it would relax his patient for a tooth extraction. As a general anesthetic, though, nitrous would never assume the final place of primacy. The primary reason for its inability to be used as a general anesthetic is that the concentration required to induce general anesthesia would result in hypoxia and eventual anoxia. As the wheels of change advanced, the root of all volatile anesthetic appeared on October 16, 1846, commonly referred to as "Ether Day," when John Collins Warren and William T.G. Morton successfully demonstrated ether's ability to induce general anesthesia for use during surgery [2][5]. This moment in time was the springboard for medicine, allowing surgeons who could not previously perform needed surgeries the availability to develop new procedures that would provide medical care for the masses.

Even with the successful use of ether as a general anesthetic,

the users of the time did not know how the compound produced unconsciousness. A conclusion would not be reached until 1899 when Hans Horst Meyer and Charles Ernest Overton independently proposed rationalization for volatile anesthetics basic function. In 1896, working off of the Bibra's Theory of Anesthesia, Meyer put forward the notion that anesthetics were intrinsically hydrophobic and would be attracted to similar hydrophobic compounds[3][5][11]. By 1899, Meyer would publish his work, *Zur Theorie der Alkoholnarkose*, where he would foundationally define "the permeability coefficient of a solute is linearly related to its partition coefficient between oil and water [15]." Around the same time, Overton was working on identifying substances which could easily "penetrate into the protoplasm of living cells [15]," therein independently helping create the foundations of membrane science. Additionally, Overton and Meyer contextualized the information on how the organic compound ether was able to permeate the bilayer lipid membranes in the brain and central nervous system [8].



Explaining the Meyer-Overton Rule

The Meyer-Overton rule, or as it is sometimes referred to the Meyer-Overton Correlation, proposes that "chemically indifferent, fat-soluble agents, would function as anesthetics [12][15]." It further elucidates that these fat-soluble lipophilic, hydrophobic agents would act at the bilayer of the central nervous system neurons to produce the desired anesthetic reaction. In short, volatile anesthetics simply permeate the cell and produce anesthesia. This discovery was the working principle based on observing cholesterol and other oily substances' ability to penetrate the cell membrane [refer to figure 1] [12][15]. For example, ether and other hydrophobic materials were pushing away from the plasma and entering the lipid layer of the cell membrane.

During the early 20th century, with the technology available, this was a significant leap forward in membrane science and anesthesia understanding. However, the definition at this point is still somewhat abstract since it did not quantifiably identify a mechanism of action and relied on a pure exogenous reaction of ether entering the cell. By no means is that statement made to discredit the pivotal work done by Meyer and Overton; instead, it is a factual statement of the time since the technology of the day handicapped these two behemoths of pharmacological science.

Refining the Possible Mechanism of Action

As time proceeded, the research into the action of anesthesia sought to find a more definitive mechanism of action. The research attempted to isolate the action of anesthetics beyond the gross understanding of simple membrane permeability. Further research beyond Meyer and Overton focused on ion channels as a critical inhibitory pathway where anesthetics work. The GABA receptor, discovered in 1950, is a pivotal piece to the puzzle for how anesthetics affect their action [2][3][6][13].

A study conducted by Nakahiro, Brunner, and Narahashi at the Department of Pharmacology at Northwestern University Medical School in 1989 researched the effects of volatile anesthetics on the GABA receptor [2]. In their study, they used the whole-cell patch-clamp technique to monitor the effects of various volatile anesthetics on isolated a GABA receptor [2]. The whole-cell patch-clamp technique, developed in the 1970s, was as a way of observing the opening and closing of ion channels via "high-resolution" electrical current recordings to determine the channel's ability to open and close in response to natural and synthetic stimuli [16].

Nakahiro, Brunner, and Narahashi were able to successfully demonstrate the opening of the GABA receptor to excite the ligand-gated receptor to produce unconsciousness.

The study revealed that the isolated GABA receptor produced a "small sustained inward current" with no interaction of volatile anesthetic [2][3][6]. After the receptor interacted with the volatile anesthetics, the current drastically changed, producing large inward currents, which decay to

a steady-state level [2]. This high inward flow and decay is best explained as the receptor's ability to suppress desensitization and potentiate a response for sensory inhibition. These accelerated decay and heightened GABA responses translate to what is commonly understood as an unconscious state. The researchers noticed that the time to steady-state decay was reduced by 70% with volatile anesthetics compared to the 23-39% control group [2]. The research done by Nakahiro et al. on modulating GABA receptors is one of many studies that furthered the work of anesthesia by moving beyond the lipophilic and hydrophobic understanding of anesthetics to observe the ion channels opening and closing from the introduction of volatile anesthetics. What was yet to be answered was whether the induction of anesthesia was an endogenous reaction or an exogenous reaction. Discovering that answer would be the focus of anesthetic research for the next three decades.

The Endogenous Analogue Hypothesis

In the late 80s and early 90s, studies demonstrated that anesthetic-induced unconsciousness from volatile anesthetics relied on the agent's ability to potentiate the GABA receptor[6]. Much the same with Meyer and Overton's discoveries a century prior, this was a significant leap forward in understanding anesthesia but still left questions unanswered. The remaining question revolved around the mechanism of action. Was it an endogenous or an exogenous reaction? This was the question Dr. Richard Lerner sought to answer.

Dr. Lerner's work revolved around the premise that the

Studies demonstrated that anesthetic-induced unconsciousness from volatile anesthetics relied on the agent's ability to potentiate the GABA receptor

underlying mechanism of action behind anesthesia was an endogenous analogue. If the mechanism of action was an endogenous analogue, then this would mean the induction of anesthesia was the result of the agent activating a natural biochemical process rather than an exogenous disruption of a biochemical process. Dr. Lerner's

interest in quantifiably identifying the mechanism of action behind general anesthetics piqued with the discovery of an intrinsically formed sleep-inducing lipid [14]. The lipid in question is oleamide, which is produced in the cerebral spinal fluid (CSF). Discovering this oleamide added validity

to the notion that the actual point of action to induce anesthesia rested in the cell's intrinsic ability to produce anesthesia. The fatty acid, oleamide, is produced in states of sleep deprivation to help induce unconsciousness [17]. The oleamide discovery was made while studying the effects of sleep deprivation on cats [14]. The discovery of this fatty acid followed the recognition that oleamides produce sleep by shifting fluid in the membrane altering lipid matrices in the cells [17]. This revelation resulted in two key facts. One, Meyer and Overton's postulation that the hydrophobicity of anesthetics and their ability to penetrate the bilayer lipid membrane was, in fact, a component of anesthetics. Two, a new biochemical regulatory process was discovered and was not reliant on direct receptor-ligand interactions [14].

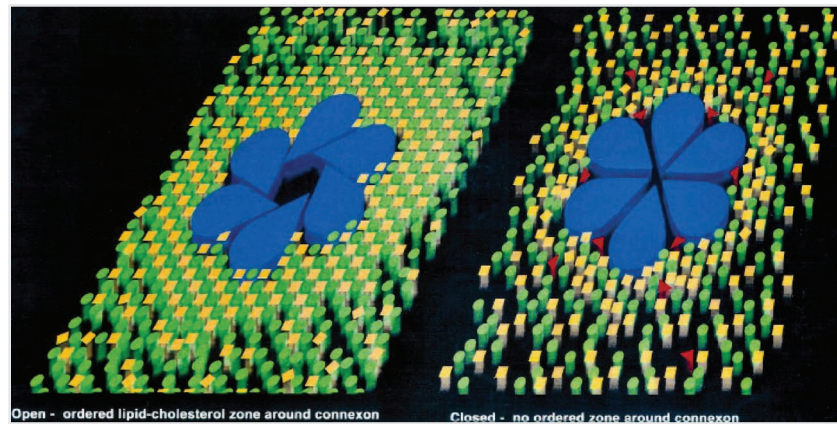


Figure 2: Image from Lerner, R. A. (1997). A hypothesis about the endogenous analogue of general anesthesia. *Proceedings of the National Academy of Sciences*, 94(25), 13375-13377. doi:10.1073/pnas.94.25.13375

With this new understanding, Lerner and other researchers asserted that the function of oleamides and volatile anesthetics alike relied on interacting with the lipid matrices [refer to figure 2] to shift fluid that would result in the ion channel opening or closing [7][14]. Imagine a room tightly packed and ordered with ping-pong balls. Ping-pong balls will represent our lipids, and in the middle of the room is a large empty bucket with a hinged lid (ion channel). Now let us say we introduce volleyballs (sevoflurane) into the room. The introduction of the volleyballs into the room will drastically affect the order of the ping-pong balls, altering the ping-pong matrices. This rapid introduction into the room would then affect the bin (ion channel) in the room, likely closing the lid, depending on the number of volleyballs put into the room. This is similar to the effect of increased MAC levels deepening the level of anesthesia. What does this all mean? The suggested result of this assertion is that the inducement of anesthesia is reliant, taking advantage of a natural biochemical process rather than a forced foreign reaction due solely to the drug.

Isolating the Function of the TREK-1 Channel

The TREK-1 channels are a type of potassium channel found throughout the CNS. These potassium channels are important in neuromodulation. Neuromodulation is essentially the alteration of targeted neurons affecting their stimulation. This is important to the discussion of anesthesia because volatile anesthetics work to potentiate these TREK-1 channels, inducing an unconscious state, which would prevent excitement or stimulation to vast parts of the CNS, such as the cortex and hippocampus [7] [10]. Interestingly, these channels, when activated, also protect the brain from ischemia and epileptic seizures [9].

A study published in 2004 in *The EMBO Journal* by Heurteaux et al. found that the TREK-1 channel, which when potentiated, was responsible for neuroprotection, was highly sensitive to volatile anesthetic [10]. While this study was pivotal for explaining the neuroprotective qualities of volatile anesthetics it did not definitively attribute a mechanism of action. Rather the resulting administration of the volatile anesthetic stimulating the TREK-1 Channel caused the cell to form the action [10]. In retrospect this study helped understand what was being observed clinically: patients were

experiencing amnesia, unconsciousness, cessation of pain, and immobility without the side effect of neurodegeneration or brain damage. Now science could identify an area where volatile anesthetics were unlocking the CNS's own ability to protect itself from neurological defects.

A Breakthrough 121 Years in the Making

On April 15, 2020 a team of researchers from the Scripps Research Institute in the Department of Neuroscience published a study identifying the endogenous action of general anesthesia. The major revelation discovered in the study found that the volatile anesthetics activated TREK-1 channels via the disruption of phospholipase D2 (PLD2) in the lipid raft matrices to signal lipid phosphatidic acid [13]. In the words of the team, "Our results establish a membrane-mediated target of inhaled anesthesia and suggest PA helps set thresholds of anesthetic sensitivity [13]." This is important because it quantifiably verifies the early research done by Meyer and Overton, which showed that anesthetics functioned by permeating the bilayer lipid membrane

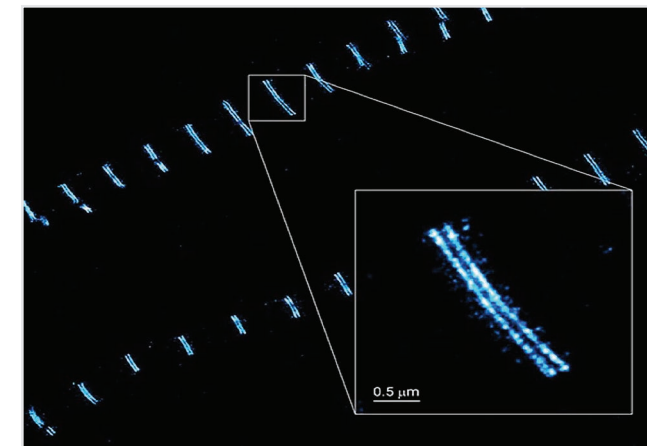


Figure 3: Image of a Rabbit psoas myofibrils. Image credit to ONI, Inc (2020).

signaling an endogenous reaction. At the same time, it also proved the hypothesis proposed by Lerner in 1997, which was that the mechanism of action of general anesthesia relies on an endogenous process.

The researchers discovered the mechanism of action studying fruit flies. One group of fruit flies, the control group, maintained the TREK-1 channel and PLD2 mechanism. Whereas the variable group of flies had the PLD2 gene deleted. The authors of study explained that fruit flies make ideal candidates for this research since they only have one

PLD gene [13]. Similar to the GABA receptor research done in the 1980s, the Scripps team utilized a whole-cell patch-clamp technique. In this study, though, they used a new iteration of the technology called dSTORM—a powerful microscope able to perform "single-molecule imaging [18]." [refer to figure 3]. With patch clamp technique and the dSTORM microscope, the team could observe the disruption of the lipid rafts as they were potentiated by volatile anesthetic. During their studies, they noticed that the PLD2 positive fruit flies were rendered unconscious when introduced to volatile anesthetics. However, the PLD2^{null} fruit flies proved resistant to the effects of anesthesia upon induction [13]. When they examined this further, they rationalized that the anesthetic sensitivity was not related to direct activation of the TREK-1 ion channel, but rather that a primary cause of anesthesia sensitivity was from the movement of PLD2 and the endogenous formation of PA. This discovery is important because it validated the research done on anesthetics since 1899 by finding the microscopic cellular unit of action. Under the dSTORM microscope, the team was able to identify large disruptions in the membrane lipid rafts, which were documented in larger-diameter changes of molecules that received anesthetic agents. This form of analysis is referred to as Ripley's radius. Furthering

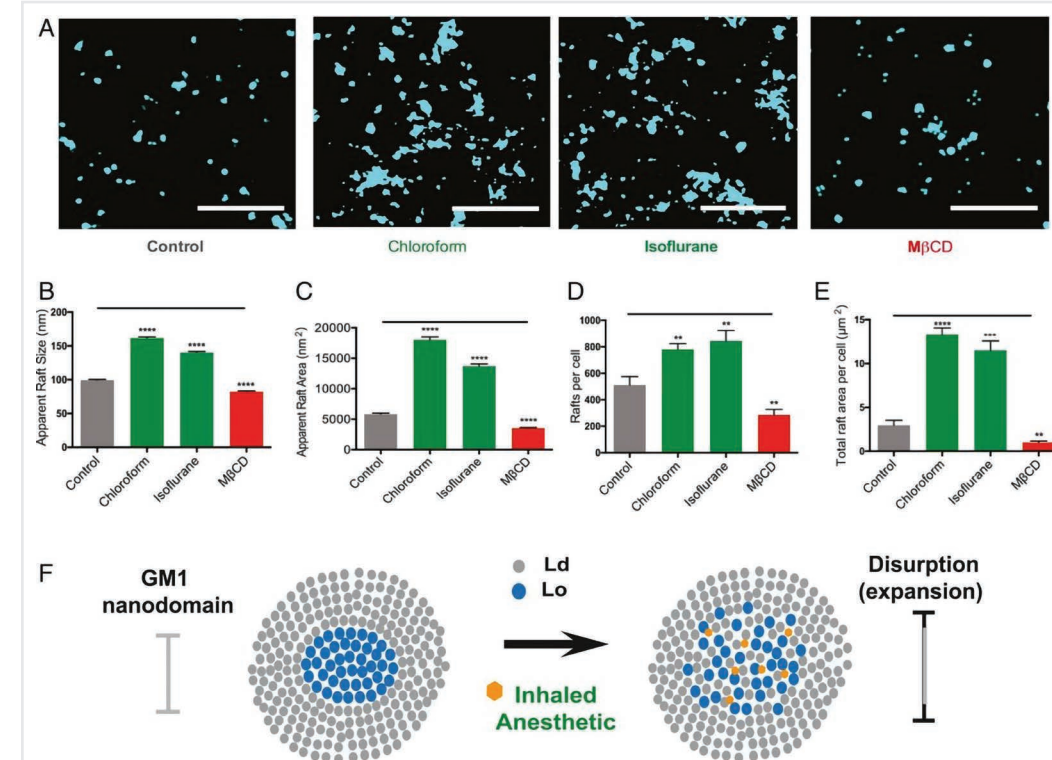



Figure 4: Image describes the effects of anesthetics on the lipid rafts in the cell membrane. The image is from Pavel, M. A., Petersen, E. N., Wang, H., Lerner, R. A., & Hansen, S. B. (2018). Studies on the mechanism of membrane mediated general anesthesia. doi:10.1101/313973.

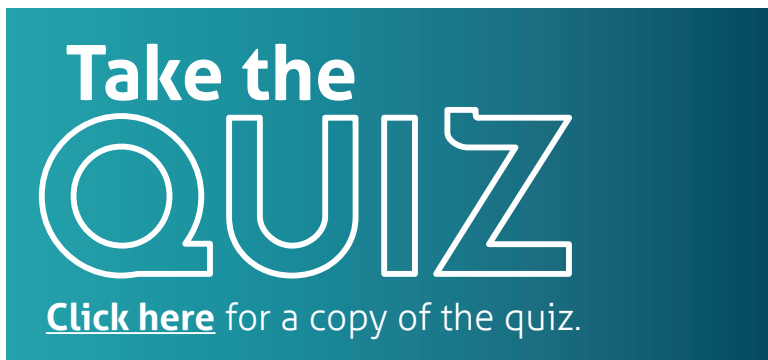
the endogenous lipid mechanism assertion, the researcher's added methyl-β-cyclodextrin (MβCD), which, when added to the membrane removes cholesterol [13]. The researchers noted that anesthetic sensitivity dropped drastically, further proving anesthesia effect being endogenous and correlated to its hydrophobic lipophilic affinity for action. For the first time in 121 years, researchers, scientists, and clinicians alike can definitively answer the question on the mechanism of action for volatile

anesthetics. Furthermore, now that this understanding of the endogenous mechanism is unlocked and answered, we may further the research into neuroscience as we continue to unlock the mysteries of the brain.

Completing the Circle

Since its discovery in 1846, ether and its succeeding synthetic fluorinated methyl isopropyl ethers compounds, have revolutionized medicine by allowing physicians to perform elective and urgent surgeries that would be impossible without its ability to shift and disrupt lipid rafts to produce anesthesia. From its first use in removing a tumor in Boston, Massachusetts to its complex administration intently focused on targeted functionality, it has revolutionized modern medicine. It is compelling to think all the way from its first use to 2020. The users of this important agent did

not understand its mechanisms of action. As the anesthesia practice moves forward, it will be interesting to see what other breakthroughs occur in understanding anesthesia and maximizing patient safety. 



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Outlook

PROGRAM DIRECTOR INSIGHTS



Starting an Anesthesia Technology Program in Pasadena, CA

In 2008, discussions began surrounding classes to upgrade the skills of the anesthesia technician staff. The project was proposed to the existing Kaiser School of Anesthesia for Nurses, under the direction of John Nagelhout, CRNA, PhD. Upon discussion, Assistant Director Michael Boytim, CRNA, EdD, suggested that a course of education in the form of a program might work better, being unsure of the educational base the current technicians had. Dr. Nagelhout suggested to Dr. Boytim that this might be a "project with your name written all over it." Soon after, Vicki Reyes, Cer. ATT, was contacted and feasibility of a comprehensive program was discussed.

At that time there was very little information about starting an anesthesia technology program.

Michael visited an existing program. ASATT had an outlined curriculum and there were a handful of programs scattered across the country. The decision was made to pattern the structure and teaching methods of the Kaiser Permanente Anesthesia Technology Program (KPAT) after a nurse anesthesia program. Michael contacted the nearby city college, Pasadena City College, to begin discussions around offering an associate degree program in anesthesia technology. After months of committee meetings and presentations, Pasadena City College (PCC) decided to go ahead and work with us to establish the program. After that came state approval. This took a little longer than promised since there were no existing programs in the city/state college system.

Finally, after gaining approval just before the beginning of the school year, we needed to sign up students! Word went out in the healthcare community that an anesthesia technology program was starting. Some students happened to be in the Health Sciences office and overheard us talking about it and asked if they could sign up. We had our first class.

We began by teaching the basics of the anesthesia technology profession, so they would know what they were getting into and simultaneously taught them about the basic equipment they would be using once they began

clinical rotations. We concentrated on the Anesthesia Gas Machine, FDA checkout, room turnover and basic medications they would see used. We also introduced them to the sterile operating room environment and the use of sterile technique, gloving, gowns and masks. We must be doing okay; they all passed the first semester! Second semester was more challenging. We added Basic Anesthesia Equipment Theory & Lab and Pharmacology and Advanced Principles. This is also when the students began their clinical rotations.

"Healthcare workers like to share knowledge and the students learned a lot."

~ Victoria Reyes, Cer.A.T.T. ~

Since the hospitals had not seen anesthesia technology students before, this was a new experience for both students and anesthesia staff alike. With a large variance of training and skills in the anesthesia technician community, providers were a little unsure and the anesthesia technicians were a little wary. In general, though, healthcare workers like to share knowledge so the students learned a lot over the ten months.

The last semester concentrated on Advanced Anesthesia Equipment Theory & Lab. The students spent

Continues on next page...

more time in the Simulation Lab and occasionally got to work with the Nurse Anesthesia students, setting up a working relationship from the start. They also had Capstone Projects for the final semester which included a mock exam with 125 multiple choice questions to review everything learned from the start of the program. This allowed us the opportunity to identify any areas that required review prior to graduation. They were also required, working with a partner, to write two research papers accompanied by a PowerPoint presentation. We invited them to engage the audience, classmates and school faculty by asking questions during and at the end of their presentation. They embraced this by creating games, including prizes for those answering correctly, which uncovered a competitiveness amongst the class. We also included resume writing and professional portfolio construction to prepare them for interviewing post-graduation.

We were able to celebrate graduation with the whole class intact and very excited about their future. They were

nervous to take the ASATT examination and felt the pressure of being the first class. Fortunately, they all passed the anesthesia technician exam and the majority went on to take the technologist examination, as at that time you had to take both.

Word got out in the community and we were able to take a larger class the following year. We learned a lot from the first class and continuously monitor and review the program to keep up with educational standards. The students are sought after for hire at the hospitals in and out of the area. We have a Recruitment Day at the end of the program, inviting anesthesia hiring managers and recruiters. At this point there are usually more job opportunities than there are graduates, so many of our students are receiving requests to work at facilities even before they complete the program.


Some of our students work and continue school after graduation. Having successfully completed a rigorous healthcare program has helped them get into nursing programs or on track to medical school. Several

of our graduates would like to return to the school after gaining nursing experience to attend the nurse anesthetist program.

This has been a very rewarding experience for everyone involved. As it evolved, we saw the need for growth in the profession and worked with professional organizations to that end. We encourage our graduates to serve the community and give back to the profession that is giving to them. All students become members of ASATT, and we encourage them to remain members after graduation. We also encourage them to get involved with the organization through committees and board positions so they can continue to see this profession grow.

This year marks the 10th anniversary of the program.

Victoria Reyes, Cer.A.T.T.

Asst. Program Director Pasadena City College/Kaiser Permanente Anesthesia Technology Program, Pasadena, CA 



Learnings

STUDENT CORNER



TIDA CHEN
ANESTHESIA TECHNOLOGY
CLASS OF 2020


Drawing ABGs, assisting with invasive lines, and seeing a live heart fibrillate all within my first year of being introduced to anesthesia was not something I anticipated. I was accepted into the program almost one year ago and I can hardly believe how much I've learned this past year. I was looking to further my education and for a way to be more hands-on in the medical field. I had been a unit secretary in a Medical/Surgical unit for about 2 years when I heard about PCC/ Kaiser Permanente's Anesthesia Technology Program. When I originally interviewed for the program, I was nervous and knew I would be working with Anesthesiologists and CRNAs but I had no idea that I would be so involved in

a patient's care. I anticipated that the application of what we learned would be difficult, but I also had no idea how rigorous the program would be. One day we would be sitting in lecture learning about different equipment to use during a difficult intubation and a week later I would see it in action. We also learned about various algorithms, surgeries, and pharmacology. At times, we had an exam every single week while still attending clinical rotations twice a week. This has definitely been one of the more challenging things I've done, but also one of the most rewarding. Whether it was comforting a crying child before surgery or helping

"Looking back, I have no regrets about the program, only that I wish I had found out about this career sooner."

~ Tida Chen ~

provide some pain relief during a nerve block, I see how invaluable anesthesia technologists are to providers and patients.

Looking back, the only regret I have is not finding out about this career sooner. I look forward to constantly learning and evolving with the profession! 

TID BITS

Sensor Quizzes

The Sensor Quizzes are back!

In each issue of our Sensor magazines we offer two feature articles, with each article accompanied by a quiz. You have the option of completing the quiz online or printing it off and sending it in.

With the two quizzes included in this Summer Issue, there are now currently four quizzes available. By the end of the year, there will be a total of eight quizzes available!

Earning CE's has never been so easy.

iPACK Block

Pain Management for
Total Knee Arthroplasty



TIDA CHEN, CER.A.T.T.

Total knee arthroplasty (TKA) or total knee replacements (TKR) are among the most commonly performed surgical interventions for orthopedics and are projected to increase 143% by the year 2050 (Inacio et al., 2017). In order to match the exponential growth of TKAs, new methods of pain management will need to be explored to minimize recovery time for patients.

Osteoarthritis is the most common reason for a patient to undergo a TKA. Osteoarthritis is a degenerative disease that often occurs due to the “wear and tear” of the joint. Patients are referred to an orthopedic surgeon by their primary care physician only after noninvasive interventions such as weight loss, medication, or physical therapy have failed. Regardless of any pathophysiologies, patients eventually undergo the surgery to seek pain relief, regain joint functionality, and ultimately improve their quality of life. With the goal of improving quality of life in mind, studies show that patients who ambulate sooner after surgery will likely see more positive outcomes (Wainwright et al., 2020).

The challenge with patients diagnosed with osteoarthritis is that the disease is often coupled with cardiovascular disease, diabetes, obesity, and hypertension (Losina et al., 2013). Due to these common comorbidities, combining various medications can adversely affect hemodynamic stability and respiratory function. Therefore, patients undergoing TKAs could benefit from minimizing the use of inessential medication. Under general anesthesia, the

provider will typically administer a combination of different agents to induce and maintain unconsciousness. The use of muscle relaxants and opioids will also be needed to immobilize and reduce pain for the patient. Additionally, each of these agents will come with side effects which the provider will need to monitor. This is where multimodal anesthesia can be more effective. *Multimodal anesthesia* is a strategy used by anesthesia providers to reach safe and adequate levels of anesthesia. Different agents and methods are used to target various sensory pathways and control pain instead of relying solely on general anesthesia. Multimodal anesthesia also produces fewer side effects that general anesthesia would typically cause (e.g. nausea, vomiting).

According to the Enhanced Recovery After Surgery Society (ERAS), neuraxial anesthesia is the preferred method over general anesthesia when it comes to TKAs (Wainwright et al., 2020). When opting for neuraxial anesthesia, the anesthesia provider will administer an anxiolytic or sedative in combination with a lower dose analgesic. Of course, this option may not be suitable for all patients. Patients who are too anxious may be a better candidate for general anesthesia or monitored anesthesia care with a supraglottic airway device. Patients will additionally receive a peripheral nerve block preoperatively. This will aid their recovery and postoperative pain management.

Peripheral nerve blocks are an important tool for pain management, allowing patients to begin ambulating sooner and can also decrease dependence on opioids. Peripheral nerve blocks commonly used for a TKA include the Adductor Canal Block, Femoral Nerve Block, and Popliteal Nerve Block. More recently, a newer block called the 'iPACK' block was introduced in 2012 and is increasing in popularity. iPACK, short for **I**nfiltration between **P**opliteal **A**rtery and **C**apsule of the **K**nee, is considered a periarticular injection (PAI), also known as a local infiltration analgesia (LIA). When administering the iPACK block, the provider will take a local anesthetic and inject it into the posterior area of the knee with a high concentration of pain fibers to effectively anesthetize the region. The iPACK block was developed by Dr. Sanjay Sinha from Hartford, Connecticut.

"A selective tibial nerve block in the popliteal fossa is an alternative to sciatic nerve block and can provide analgesia without causing a foot drop."

~ Dr. Sinha ~

iPACK Block

The iPACK block can be effective at controlling posterior knee pain post operatively. This is achieved by selectively anesthetizing the distal ends of the articular branches while sparing the proximal portions of the common peroneal nerve and sciatic nerve. Using the iPACK block in conjunction with the femoral block or adductor canal block will provide adequate analgesia without loss of motor function often seen when combining a femoral block with a popliteal block or sciatic block. As Dr. Sinha (2012) states, "A selective tibial nerve block in the popliteal fossa is an alternative to sciatic nerve block and can provide analgesia without causing a foot drop." This means the patient will have use of their foot and will be able to stand or possibly put weight on it with assistance. Since the block is increasing in popularity, here is some basic information on how the block is performed and our role as technologists.

Certified Anesthesia Technologist's Role

At the start of the procedure, Anesthesia Technologists begin by assisting with positioning the patient as well as prepping the affected leg. The most common position for the patient to be in is supine with the knee flexed. It may be helpful to use towels as a footrest to help position the leg. The medial portion of the affected leg will need to be cleaned with chlorhexidine preparation and the surrounding area should be draped with sterile towels to maintain sterility.

Prior to the start of the procedure, it is important that we make sure the patient already has intravenous (IV) access established, as well as supplemental oxygen and monitors applied (continuous pulse oximetry, blood pressure monitoring, and electrocardiogram). A significant part of our role as technologists and technicians is to always be prepared for the worst-case scenario— so in addition to having access to extra supplies, make sure that the emergency resuscitation equipment is nearby. Most importantly, we want to ensure we have the 20% lipid emulsion solution available in the rare case that the patient were to experience symptoms of Local Anesthetic Systemic Toxicity (LAST). Once the patient is connected to



Figure 1: Patient in supine position with leg flexed and transducer on the popliteal fossa (NYSORA, 2020)

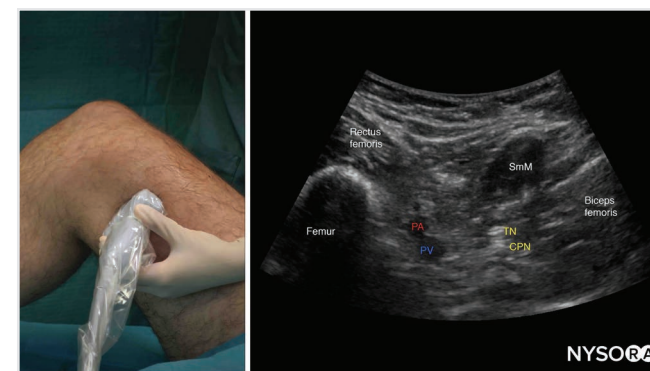


Figure 2: Patient with the transducer positioned on the medial side of the leg (NYSORA, 2020)

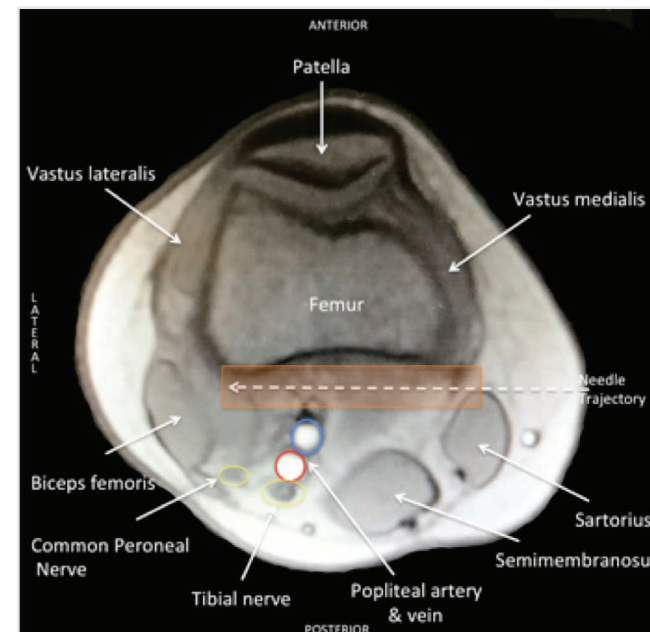


Figure 3: Cross sectional view of the leg (Sinha, 2019)

the monitors, we should participate in *time out* to ensure patient safety by properly identifying the patient, reviewing allergies, medications, confirming patient consent, and also confirming that the correct block is being performed on the correct leg.

Next the Anesthesia provider should don sterile gloves and put on the sterile probe cover. He or she will then position the ultrasound probe at the popliteal fossa to identify the femur, popliteal artery, and popliteal vein (Fig. 1). The femur is often identified when the provider slides the transducer proximally and distally to see a curved hyperechoic structure. When compressed, the pressure of the transducer will help identify the popliteal vein and the pulsatile popliteal artery next to it. The technologist may suggest the use of the color doppler to confirm the location of the popliteal vessels. The common peroneal nerve and tibial nerve should also be identifiable if the ultrasound transducer is positioned towards the distal end of the femur. Alternatively, some providers may prefer to position the ultrasound transducer on the medial portion of the thigh (Fig. 2). Once the needle is inserted in the desired position, the local anesthetic will then be injected. If your facility and job description allows for technologists to perform the mechanical function of infusing local anesthetics, always make sure it is done under the direction and supervision of the anesthesia care provider.

Fig. 3 shows a cross sectional view of the thigh. Notice the trajectory of the needle and its close proximity to the popliteal artery and popliteal vein. It is critical that we always make sure to aspirate and check for blood before infusing the local anesthetic. Technologists exist as a part of the anesthesia care team to provide safe patient care, so we must be vigilant about aspirating every 5ccs to keep the patient safe and to prevent intravascular injection that may lead to LAST.

It is also good practice to frequently communicate with the anesthesia provider. You should verbalize when you begin infusing, when you are aspirating, and the total amount of local anesthetic that the patient has received. If increased resistance is felt when infusing the anesthetic, it is important to let the provider know so they can reposition the needle to avoid any complications. Finally, we should keep an eye on the patient and monitor vital signs throughout the process. If the patient is experiencing pain or if there are any abnormal values on the vital sign monitor, we should stop, assess, and decide if it is safe to continue. When administered correctly, the local anesthetic should be seen dispersing between the femur and popliteal vessels.

Non-contact Infrared Thermometers & Seek™ Scan Thermal Solutions

Did you ever think that there would come a day when we would need to have touchless temperature scanning completed before entering your workplace? Though COVID-19 has presented many challenges, it has opened the door for new technology to be introduced into the workplace. An example of this is touchless temperature scanners. The scanners provide accurate, quick, and non-invasive data that ultimately provides a sense of security and safety to both staff and patients. Non-contact infrared thermometers are available in hand-held devices that allows personnel to scan an individual's forehead. While this is safer than the traditional oral temperature route in that it minimizes cross-contamination, it still places individuals at risk due to the distancing measures that are required to obtain an accurate forehead reading. A newer technology that is now being used in healthcare and other facilities in which a large number of individuals pass through on a regular basis is Seek Scan Thermal Imagery. This allows safe temperature monitoring from a distance, thereby eliminating any type of human contact. Seek scan equipment is designed and calibrated to automate body temperature screening using skin temperature as a proxy. The software utilized is easily customized for specific temperature ranges. A camera is placed 5-6 feet away and focuses on facial recognition. The thermal image is reproduced on a computer screen and within one to two seconds the temperature reading is displayed on the monitor. Not only does this reduce the time of traditional temperature taking, it also reduces contact between personnel and those being screened. It also reduces the amount of time required to take an infrared or traditional temperature.

Sue Christian, Cer.A.T.T. 

Complications

While the iPACK block has facilitated faster recovery for many patients, there are risks of complications that come with using the block such as infection. While infection from a peripheral nerve block is very rare, it is still important to practice proper hand hygiene and aseptic technique.

The potential risk for traumatic nerve injury should also be kept in mind. There can be a significant nerve injury that occurs when the needle penetrates the perineurium and enters the fascicle. For this reason, we must infuse the local anesthetic in fractions, communicate increasing resistance to the provider, and look at the patient for any signs of pain when performing the block.

Another significant risk that comes with infusing local anesthetics is the possibility of LAST. Despite the

occurrence of LAST being low, the risk is still present and it is important to be able to recognize what some of the signs and symptoms are. Throughout the procedure, it is important to communicate with the patient and determine if there is any new onset of confusion or disorientation. Some patients may become agitated or restless. Gittman, Fettiplace, & Weinberg (2020) state that the patient may complain of a metallic taste, visual, or auditory disturbances (tinnitus). More severe manifestations such as tonic-clonic seizures, sudden arrhythmias, and sudden changes in blood pressure may occur. If any of these symptoms are present, the procedure should be stopped immediately. Additional help should be called and if symptoms persist or escalate, the Advanced Cardiac Life Support team should be notified. If the patient is having a seizure, the provider will need to administer midazolam and someone should be managing the airway by providing 100% oxygen and placing an advanced airway if necessary. Providing the 20% lipid emulsion is crucial and should be started right away. According to NYSORA's LAST Protocol, the initial dose of the 20% lipid emulsion should be 1.5 mL/kg and given over one minute. Following the bolus, the rate of infusion for the lipid emulsion should decrease to 0.25 mL/kg/minute. The patient should be continually assessed until stable enough to transfer to an intensive care unit.

While it is important to understand the symptoms and treatment of LAST, prevention is key. As mentioned time and time again, communicating with the provider and the patient is absolutely vital. The iPACK block is still quite new and the success of the block is dependent on the experience of the anesthesia provider. If the provider is struggling, having a second provider assist may help to avoid putting the patient through any unnecessary pain and danger. Again, when trying to identify the correct position, technologists can offer to turn on the color doppler to help identify the popliteal vessels. It may also be beneficial for the technologist to review ultrasound images to help identify structures as well.


While the iPACK block has facilitated faster recovery for many patients, there are risks of complications that come with using the block such as infection.

According to Gittman, Fettiplace, & Weinberg (2020), some additional risk identifiers include petite patients, patients with low muscle mass, pre-existing heart

conditions, and geriatric patients. The same authors also note that incidents of LAST greatly decrease with the use of an ultrasound, incremental injection with aspiration, and medication usage at the lowest effective dose. With that being said, none of these preventative measures are fool-proof and it is important to incorporate all of these pieces of information to keep patients safe.

Conclusion

Anesthesia is complex and requires not only knowledge but comprehension of anatomy, physiology, pathophysiology, and pharmacology. With new techniques always in development, technologists play an important role in keeping the patient safe as a part of the anesthesia care team.

Our providers often need to focus their attention in multiple directions simultaneously— from the patient, to the ultrasound monitor, to the pumps and lines. Our job as healthcare professionals is to help our Anesthesiologists, CRNAs, and Anesthesiology Assistants provide the best care possible by keeping our patients comfortable and safe throughout their perioperative experience. Whether help comes in the form of a second set of eyes or a second pair of hands, our assistance and preparation during an emergency or even a routine procedure can be paramount. 

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Take the
QUIZ

[Click here](#) for a copy of the quiz.

Partners

ASA

A QUICK GUIDE FOR USING AN ANESTHESIA MACHINE AS A VENTILATOR

During the COVID-19 pandemic, it has become of interest as to the ability of an anesthesia machine to be used as a ventilator for respiratory failure. Although an anesthesia machine can provide positive pressure ventilation, it is not FDA approved (unless through an emergency exemption such as the COVID-19 pandemic) to be used for long term ventilation.

An excellent reference is the white paper published as a collaboration between the Anesthesia Patient Safety Foundation and the American Society of Anesthesiologists: *APSF/ASA Guidance on Purposing Anesthesia Machines as ICU Ventilators*.

When using an anesthesia machine as a ventilator, a team approach is required, involving, at the least, an anesthesia team with an understanding of the machine and an intensivist with an understanding of the ventilatory demands of the patient.

The most important difference between an anesthesia machine and a ventilator is that the anesthesia machine allows for rebreathing of exhaled gases. Also, an anesthesia machine can deliver inhaled anesthetics requiring the use of a scavenging system to avoid anesthetic gases contaminating the ambient air. Scavenging systems will also be required if appropriate filters for contagions are not utilized. The use of a scavenging system can be avoided by removing the inhaled anesthetic canisters and disconnecting the nitrous oxide tank and wall outlet from the ventilator and using appropriate viral filters. If the inhaled anesthetics are to be used for sedation as with an intravenous sedation shortage, scavenging would be required.


If fresh gas flows are not equal to or exceed minute ventilation, rebreathing of exhaled gases will occur, and humidity will accumulate, leading to increased airway resistance, requiring more frequent changing of the

filters. Furthermore, lower flows leading to rebreathing will increase the use of the CO2 absorber, requiring more frequent changing. The APSF/ASA white paper, updated April 2020, recommends changing the CO2 absorber once the inspired CO2 level exceeds 5 mmHg. The removal of the CO2 absorber is not recommended because if rebreathing occurs, elevation of the inspired CO2 will occur.

Keeping the fresh gas flow equal or above minute ventilation will obviously eliminate rebreathing and the use of the CO2 absorber, however, it will cause an increase in the demand for inspired gases including oxygen, which is a detriment if oxygen pipeline failure has occurred. Also, the fresh gas is not humidified, therefore a drying of the patient's airway can occur, requiring a secondary means of humidification.


The optimal anesthesia machine to be used as a ventilator would have multiple modes of ventilation including both volume and pressure-controlled ventilation as well as pressure support. Furthermore, electrically and not pneumatically driven machines should be utilized to reduce the oxygen requirement. If only pneumatically driven anesthesia machines are available, switching to the utilization of compressed air should occur, conserving oxygen. Lastly, the ability to monitor the inspiratory and expiratory volumes as well as a flow volume loop would be advantageous to identify a gas leak within the circuit, especially around the endotracheal tube leading to a release of contagions in the ambient air, or a buildup of humidity leading to increased airway resistance requiring changing of the filters or removing condensation from the circuit.

(APSF/ASA Guidance on Purposing Anesthesia Machines as ICU Ventilators. Updated April 2020.)

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Liaison to ASATT 

AANA

The American Association of Nurse Anesthetists (AANA) maintains liaisons with the many external organizations such as ASATT. The mission of the AANA Liaison to ASATT is to provide guidance and collaboration that offers assistance to raising the standards for anesthesia technology in the delivery of patient care and providing a safe anesthetic environment. For over 36 years, I have been involved with the AANA Council on Accreditation of Nurse Anesthesia Education, and the National Board of Certification/Recertification of Nurse Anesthetists. Because of these experiences, I was able to assist ASATT in the development of the Committee and Accreditation of Anesthesia Technology Education (COA-ATE), which is the body responsible for accreditation of anesthesia technology programs, as well as development of standardized education curricula for anesthesia technology. As past chair of ASATT's National Certification Exam Committee, I assisted in the redesign of the current national certification examination and am involved in the process of development of a practice certification examination. I have worked with so many dedicated anesthesia technologists in ASATT that assisted me in the development of these important entities and I look forward to future collaboration.

Take care and stay safe!
Michael Boytim CRNA, Ed.D.
Liaison to ASATT 

Looking for "Vintage" ASATT merchandise?

With the rebranding of ASATT, we find ourselves with an overstock of ASATT merchandise.

We have taken inventory and reduced prices on items such as Conference t-shirts, hooded sweatshirts, travel mugs, and more!

Check out the [Storefront on the ASATT website](#) for deals and be on the lookout for more sales announcements.



Notes

REGIONAL UPDATE

REGION 1



SENSOR Report

Our very First Virtual ASATT Educational Conference is almost here and we will be having a blast while learning so much more than you could ask for. Can you believe that you can earn up to **21 CEs?! THAT IS JUST CRAZY!!!!** I cannot wait. It


is going to be so exciting. Region 1 is going to have a couple meetings of our own as well. We are going to try and have at least one Regional Meeting, or at least that is my goal. I am going to try to have one before the Annual Meeting and then one after all the excitement has settled down so people can have a chance to relax and enjoy some time to absorb all of the excitement. Ok, so where do we start??? There is so much to talk about here.

The Regional Educational Award. I have been asking people to nominate someone within our Region for months and year after year. I don't know how to entice people to get them to nominate a doctor that they work with or a CRNA, a Sales Rep, or anyone that takes the time to educate the Anesthesia Techs. Anyway, I had to nominate someone who is quite deserving of the award. These two individuals that are getting the Regional Educational Award are ones that I nominated. I know that they are getting the award because they are both quite deserving of the award. These two, who work together, who have held several meetings for me, who tend to go above and beyond when they do hold a meeting. The quality of the speakers, the time spent getting the speakers, choosing the food, the Vendor support that they get, it is all just simply overwhelming as they both are. I am pleased to announce that the recipients of this year's Annual Regional Educational Awards for Region 1 are Alvin Mangubat and Angel Martinez from NYU Langone. Their meetings are always a success as all meetings are and soooooo much fun. A pure pleasure to work with these two. THANK YOU BOTH for all that you have done!!!

This year's National Meeting is going to be virtual, however the first ever ASATT Virtual National Meeting. We will have a lot of amazing lectures and free stuff for the attendees. Going to be very exciting, disappointed that I cannot get to see all my friends in person. Next year it will be in Fort Worth, we do know that for sure. Go to the ASATT Website to get all the information as I am sure it has much more information than I do, so go to www.asatt.org.

Now for the Regional Meetings. I am going to be having one soon. I still do not have a definite date but will posting the date real soon. As soon as I can confirm the date, I will send it out in an email blast. I do have one lecture confirmed, waiting for two more to confirm then I will submit everything for my meeting. Then we have a couple more people that have offered to host a Regional Meeting.

If it is your year to recertify, **please, please, please** do not wait until the last minute to start the process. Start it now and get it done. So much easier to do it now. If you need help, email me or call me and I will try to walk you through it. I would be glad to help you. We (ASATT, including headquarters) have tried to make this as painless and easy as we can, and it is more important now than ever to get this done. DO NOT LET CERTIFICATION LAPSE. IF YOU ARE A CERTIFIED ANESTHESIA TECHNICIAN, YOU CANNOT GET IT BACK.

Please STAY SAFE AND HEALTHY,
Jonnalee Geddis, Cer.A.T. 



REGION 2

Hello ASATT members,

I would like to mention some updates for Region 2 and for the National Educational Conference:

I'm very excited about ASATT's First Virtual National Educational Conference!! Registration is now

open and I hope you can join us!! This is a great way to earn your CE's!! The conference will be held from September 11 through September 13, 2020. Below are details of the conference:

In honor of their first virtual conference, for the first time ever, there will be a flat conference registration rate for ASATT members! Not a member – [join today!](#)

Hurry, registration closes September 7, 2020. Visit the conference [AGENDA](#) and [REGISTRATION](#) for more details.

The voting polls have closed for the Regional Director's position. The Regions open were 2, 4 and 6. I have very much enjoyed representing our Region 2 and I would like to thank our members for giving me the opportunity to serve them!

I have more exciting news for Region 2! We will be holding our very first Virtual Meeting in October of 2020. More details will post shortly to the ASATT website.

Hope to see you at the first Virtual EducationalConference.

Take care and stay safe everyone!!

Karen Patrick, Cer.A.T. 



REGION 3

Greetings Region 3,

I sincerely hope everyone within the region is staying safe, since we seem to be the largest hot spot for COVID-19 at the moment.

While we struggle to find the "new norm" amid battling the

virus, I would like to remind all members that since our traditional face-to-face meetings have been canceled this year, we have moved the Annual Educational Conference to a virtual format. The conference will provide an excellent opportunity to earn much needed CE's for recertification. Region 7 has a meeting coming up in August as well. Check the ASATT homepage often for educational opportunities. Region 3 will be "host" to a meeting later this year. If you have speakers who would be interested in presenting a topic, please let me know.

May you and your family stay safe during this time,

Sue Christian, Cer.A.T.T. 



REGION 4

Hello Region 4!

Well, summer is starting to slowly turn into autumn. I hope everyone has been able to enjoy some time with family and friends!

Our first ever Virtual National Educational Conference is right

around the corner and I hope y'all have registered or plan to, as there are 21 CE's possible! For those technicians

renewing their certification this year, this would give you all the CE's you would need and for the technologists, it's a majority of what we need!

Work on our Region 4 webinar continues. Unfortunately, with the ever-changing healthcare climate these days, plans seem to be ever-changing...rest assured, we are constantly working to get y'all taken care of! If you are interested in helping plan the webinar or have an idea for a topic/speaker, let me know. I'm always open to your ideas and suggestions...

As always, be safe and see you soon.

Matthew Chandler, Cer.A.T.T. 



REGION 5

Welcome Region 5,

I hope this message comes to you in good health and high spirits. As everyone knows, the healthcare world has taken a turn, and I am hoping everyone is staying safe and healthy.

I know that proper PPE has been hard to come by, but if your hospital is letting you bring in you own PPE there is a program out there called MasksOn.org. They are donating a shield respirator as long as you can get a hold of the proper filter. This year all our Regional Meetings have been postponed and turned into Virtual Regional Meetings. With that being said, I would still like to hear from people that would have interested parties for a virtual presentation. If you have any questions, please contact me and we can see how I can help you out. As you have seen and hopefully heard, the 2020 National Educational Conference has changed to virtual as well. It will still be held September 11-13. Sign up has already begun and for \$150 you can earn up to 21 CEs. There are also day rates if you are not able to attend all three days. I hope to be able to see some familiar names from last year and make some positive contacts for future meetings.

Stay safe,

Jason Menchey, Cer.A.T. 

Continues on next page...

REGION 7



Howzit Region 7!!!
Yes, summer is here... but things are not the same. Our new normal is not something for anyone to mess around with and not something anyone really enjoys. We are in the craziest period of our lives. Please

stay vigilant. We don't need anyone in our ASATT Ohana contracting COVID-19. "Situational Awareness". Don't let your guard down, stay alert, and be prepared because the next wave is here. In Hawaii, this wave is worse than the initial one. We're all in this together. Stay protected, wear a mask, and social distance when you're out an about. Take care and be safe...

"It's not the strongest of species survive, nor the most intelligent, but the one most responsive to change."

~ Charles Darwin ~

These are the things that I look forward to during summer... The Major League Baseball season rolling along, the National Basketball season winding down into the playoffs, and the beginning of NFL & NCAA football seasons. But, it's not the same this summer. Hard to believe...

COVID-19 has disrupted SO many events worldwide. Last month during our ASATT Board of Directors Zoom call, we voted to cancel/postpone ALL live/face-to-face meetings for 2020. There was also a discussion to permanently stop all live Regional Education Meetings. Resumption of these meetings will be revisited at the end of the year.

So, virtual meetings will be the norm for the remainder of 2020. We have already had a one Zoom CE meeting with Bryan Fulton. He did a great job. Region 7 held a four hour Zoom meeting on Sunday, August 9th, and there were over 70 registered to view the meeting. I'm planning to have additional virtual meetings sponsored by Region 7 toward the end of the year for members who need additional CE's for recertification. Please send Justin or myself and email if you're able to help us with a speaker.

Don't forget about ASATT's First Virtual National Educational Conference. This conference was to be held in Fort Worth, TX, and the live meeting has been rescheduled to September

2021. President Greg Farmer and his team have worked diligently to convert this meeting into a virtual one and have spent countless hours trying to assemble this whole package. Please plan to attend/view the meeting. Check the ASATT website for details.

"The hardest thing about 'everything happens for a reason' is waiting for the reason to come along."

~ Anonymous ~

Obviously, Region 7 will not be able to accomplish our live meeting goals that were set in the beginning of the year to have a productive 2020. But, we must look at the possibility of the live meetings returning in 2021. As in years past, our region was a leader in providing educational opportunities for our peers. I'm always looking for new people who are willing to become a leader in the region to coordinate educational meetings. With new coordinators come new speakers or presenters, and new people to promote more networking. I love networking with others for one BIG reason: if there's something I need to find out about what our peers are trialing or a "new" product, I can email them to get their opinion on the product. Or if there is a "service" we're doing and I need to find out if other facilities are doing it, I can email our peers. Think about it. It's not easy but it's not hard.

"A goal without a plan is just a dream."

~ Brian Tracy ~

"Leadership is an action, not a position."

~ Brian Tracy ~

Let's resolve to continue to uphold Region 7's status as the leading region in ASATT, helping educate our peers and moving our profession forward. As I have said before... We are laying the foundation for future generations of Anesthesia Technicians & Technologists and we MUST build this **together**.

Please be careful with COVID-19. It's nothing to take lightly. Take precautions and follow all of the CDC bulletins and guidelines, but don't let it overwhelm your life. Visit the "upgraded" ASATT website to review information.

PLEASE BE SAFE AND PROTECT YOURSELVES...

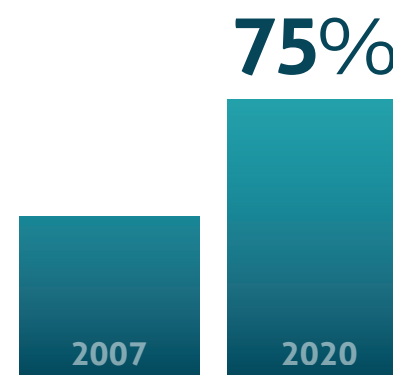
Aloha,
Delbert Macanas, Cer.A.T.T. 

TID BITS

ASATT is YOU!

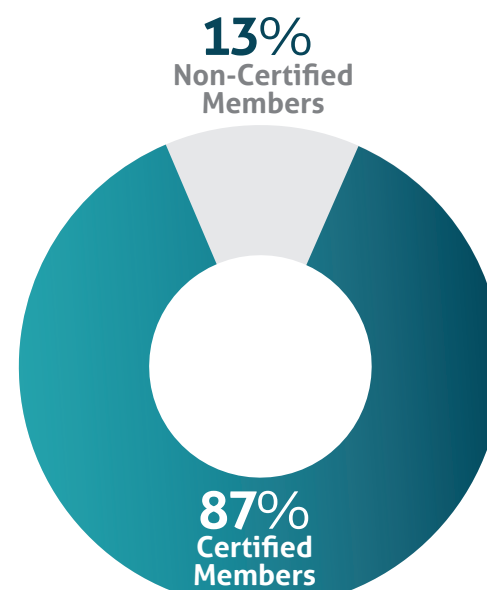
A breakdown of the current ASATT members, by the numbers.

1,735
Current ASATT Members



Member Growth Since 2007

(Year that ASATT and AEG joined forces to manage the Society)



Academy

ASATT ACADEMY


ASATT is continuing to expand its learning and CEU earning opportunities in 2020 with additional and ongoing Sensor articles, quizzes, and online learning opportunities through Regional Meetings and the Society's first ever Virtual Educational Conference.

Sensor Quizzes

We are well underway with our Sensor magazine coming back in full force and better than ever. Thank you to all that have contributed articles. We are always looking for contributions for the feature articles and quizzes as well as student, membership, and educational director articles. Contact the Communications Committee at communicationscommittee@asatt.org to submit your article ideas.

With this Fall issue, we now have six new quizzes online for 2020. These are a great way to earn CEs on your own schedule and convenience. Sensor quizzes are located on the ASATT website at <https://www.asatt.org/index.php/asatt-academy/sensor-quiz>.

ASATT Regional Meetings Go Virtual

A large part of ASATT's learning opportunities have been through the Regional Meetings, each being hosted by the Regional Director and offering great learning opportunities for those members and non-members within the Region. Now, with Regional Meetings going virtual, there are more opportunities than ever before for online learning. Region Seven just hosted the first virtual Regional Meeting and drew 73 attendees from 16 states and 3 countries. The meeting featured four sessions with a total of seven speakers. Watch for additional announcements for upcoming Regional Meetings on the ASATT website an in the ASATT Update email. 

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Volunteer on
a Committee?

Join one of our ASATT Committees by visiting our [Committee page](#).

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- Certification and Recertification Committee
- Communications Committee
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- Ethics Committee
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