# **AVNeo<sup>®</sup> Newsletter**

## Vol. 1 - March 2022



# Are you interested in training for the AVNeo<sup>®</sup> procedure?

Training is fundamental for the AVNeo procedure. JOMDD is supported by a network of ten (10) proctors worldwide who are responsible for supporting cardiac surgeons through their learning journey.

**Module I** begins with didactic lectures where surgeons learn the benefits, outcomes, and ideal patient populations for the AVNeo procedure to the advanced techniques of transforming a bicuspid valve into a tricuspid valve.

**Module II** shifts to hands-on Dry Lab training by reconstructing a new aortic valve into a silicone model. This module offers the opportunity to learn proper measuring and sizing techniques and the standardized approach to suturing the new leaflets into the native annulus.

**Module III** includes in operating room experience to see your Course Director reconstruct the aortic valve using the entire AVNeo procedure.

**Module IV** is an opportunity for a certified AVNeo Proctor to visit your facility and support your first AVNeo cases.

We look forward to supporting all your training needs!



#### Missed the webinar? Don't worry!

**DIOWDD** 

Were you able to join the Dec 2021, AVNeo webinar? We had a record turnout with over 200 individuals registered. This was Webinar #11 and from the feedback, it was our best webinar yet! The focus was on AVNeo or the Ross? Discussion centered around a 50-year-old, active male, suffering from symptomatic, aortic stenosis.

If you missed this or any of the AVNeo webinars, you could find them all on our AVNeo website:



Aortic Valve Disease in Non-elderly Patients

**AVNeo** 

#### <u>www.avneo.net</u>

#### What's New in Research?

The Ross procedure currently represents the preferred procedure in children with severe AV dysfunction. However, the procedure is burdened with its own complications including significant operative mortality and late complications related to autograft dilatation and durability. These issues suggest a growing need for the development of alternative solutions. The use of AVNeo, the Ozaki procedure, has shown promising results as an alternative to the Ross procedure.

Polito et al. (2021) found that 38 children undergoing the AVNeo or Ross procedures both showed satisfactory early and midterm hemodynamic results. Aortic ring and root indexed dimensions remained stable throughout the five-year study period in both groups.

Secinaro et al. (2021) examined the hemodynamic profile of patients undergoing AVNeo or Ross via 4D cardiovascular magnetic resonance studies and found that proximal aorta flow dynamics of children treated with the Ozaki and the Ross procedure are comparable. AVNeo restores a physiological laminar flow pattern in the short-term follow-up, similar to the Ross, while not inducing bi-valvular disease.

Both studies concluded that AVNeo showed good results and may be a viable alternative to the Ross procedure. Polito et al. (2021) reported that it may be a better procedure for younger patients while utilizing an integrated approach based on the early use of the procedure as a bridging solution towards subsequent alternative surgical treatments of AVD.

References:

Polito, A., Albanese, S. B., Cetrano, E., Forcina, S., Cicenia, M., Rinelli, G., & Carotti, A. (2021). Aortic Valve Neocuspidalization May Be a Viable Alternative to Ross Operation in Pediatric Patients. *Pediatric cardiology*, 42(3), 668–675. https://doi.org/10.1007/s00246-020-02528-3

Secinaro, A., Milano, E. G., Ciancarella, P., Trezzi, M., Capelli, C., Ciliberti, P., Cetrano, E., Curione, D., Santangelo, T. P., Napolitano, C., Albanese, S. B., & Carotti, A. (2021). Blood flow characteristics after aortic valve neocuspidization in paediatric patients: a comparison with the Ross procedure. *European heart journal. Cardiovascular Imagin, 23*(2), 275-282. <u>https://doi.org/10.1093/ehjci/jeab009</u>



Dr. Danny Chu is an adult cardiovascular surgeon and currently serves as the director of Cardiac Surgery at the VA Pittsburgh Healthcare System and as a senior staff cardiac surgeon at the UPMC Heart & Vascular Institute. He has authored over 100 peer-reviewed manuscripts and serves on multiple editorial boards, including the American Journal of Cardiology, JAMA Surgery, and World Journal of Surgery. Dr. Chu also serves as the Surgery Section Editor for the journal Medicine.

Dr. Chu was one of the first US proctors for AVNeo and was trained by Professor Ozaki in 2015. He has completed over 100 AVNeo cases.

Quarterly training is offered at the Winter Institute for Simulation Education Research (WISER) in Pittsburgh, JOMDD's Center of Excellence, since 2019.

JOMDD offers training courses worldwide, so please let us know if you need assistance.



## Upcoming 2022 2-Day AVNeo Training Courses Training Dates - Location- Course Director

May 2<sup>nd</sup> & 3<sup>rd</sup> - Cotignola, Italy – Prof. Albertini May 17<sup>th</sup> & 18<sup>th</sup> – Yale New Haven, CT – Dr. Krane June 6<sup>th</sup> & 7<sup>th</sup> - Cotignola, Italy – Prof. Albertini June 21<sup>st</sup> & 22<sup>nd</sup> - Pittsburgh, PA, USA - Prof Chu

Contact avneo\_admin@jomdd.com to reserve your spot

