

Sun. Jul 11, 2021

Track6

Invited Lecture

### Invited Lecture16 ( III-IL16)

Chair: Hideo Ohuchi (National Cerebral and Cardiovascular  
Center, Japan)

9:00 AM - 9:50 AM Track6 (現地会場)

[III-IL16] The Fontan in 2021 : new understandings and  
new challenges

○David J. Goldberg (Perelman School of Medicine  
at the University of Pennsylvania / Children's  
Hospital of Philadelphia, USA)

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## [III-IL16] The Fontan in 2021 : new understandings and new challenges

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The Fontan operation, originally described for the surgical management of tricuspid atresia, is now the final surgery in the strategy of staged palliation for several different forms of single ventricle congenital heart disease. Despite the improved technical outcomes of the Fontan operation, staged palliation does not recreate a normal physiology. Without a pumping chamber delivering blood to the lungs, the cardiovascular system is less efficient; cardiac output is generally diminished, and the systemic venous pressure is increased. As a result, patients with "Fontan physiology" may face a number of life-altering or life-threatening complications including decreased exercise capacity, sarcopenia and osteopenia, hepatic dysfunction, thromboses, and various forms of lymphatic insufficiency.

While staged palliation has resulted in remarkable survival, the possible complications for this group of patients are complex, involve multiple organ systems, and can be life threatening. Identifying the mechanisms associated with each of the rare complications and developing strategies to treat them requires the work of many people at many institutions. There are opportunities to develop registries to allow for a more comprehensive understanding these patients, to develop medical strategies to optimally support the circulation, and to develop new applications of mechanical circulatory support to aid those who physiology has failed. Continued and expanded collaboration between sub-specialists and between institutions will be required to optimize the care for those born with single ventricle congenital heart disease.