

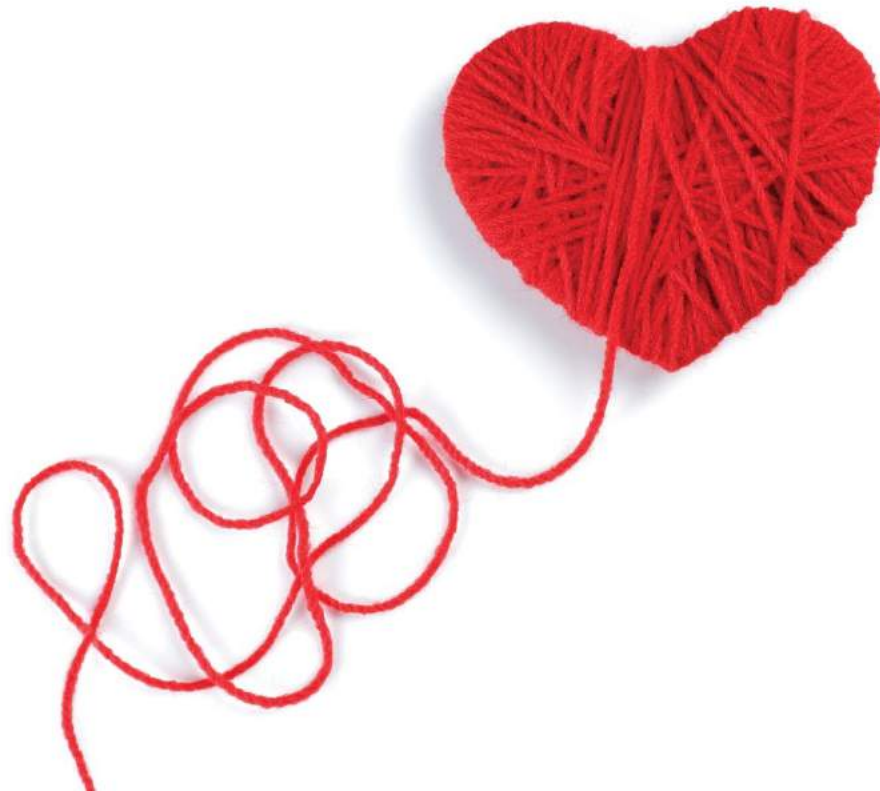
CARDIOLOGY
2023

CASE STUDY: SUPPORTING THE FAILING GLENN

Lynne Ha, CRNP

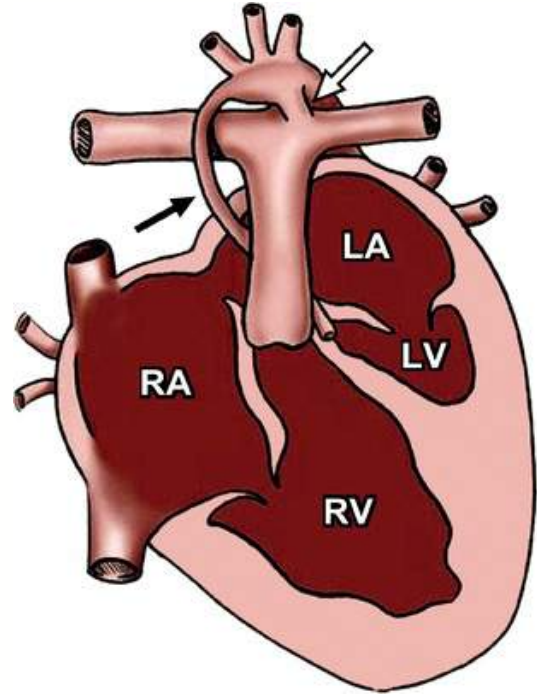
Heart Failure/Heart Transplant Nurse Practitioner

Children's Hospital of Philadelphia



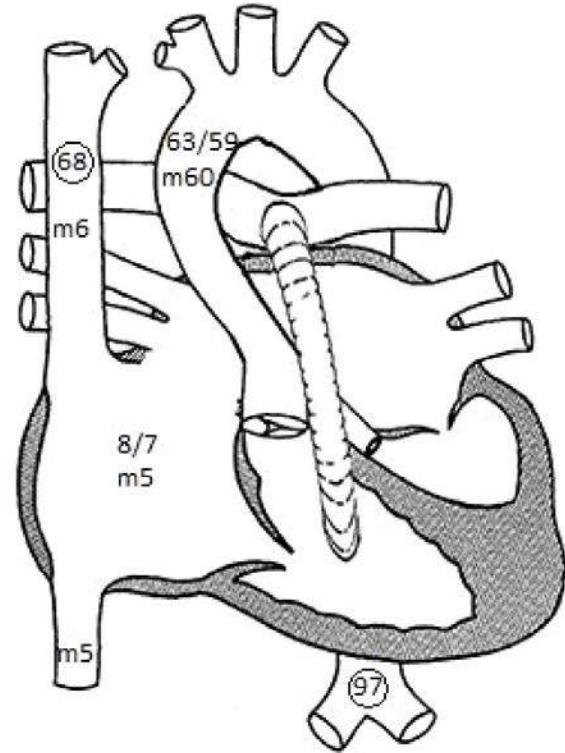
BIRTH HISTORY

- Prenatally diagnosis: hypoplastic left heart syndrome (HLHS), mitral stenosis, aortic atresia type
- Born full term at 38w3d in the Special Delivery Unit at CHOP
- First child for mom, GBS positive, no pregnancy complications



STAGE 1

- DOL 3: Norwood with Sano shunt
- Complicated Postop course
 - ECMO (7/26-8/7)
 - Cath: coronary cameral fistulae
 - Arrhythmia: JET, EAT
 - Infections : Mediastinitis, *candida Albicans*
- Moderate-severe TR with moderate RV dysfunction



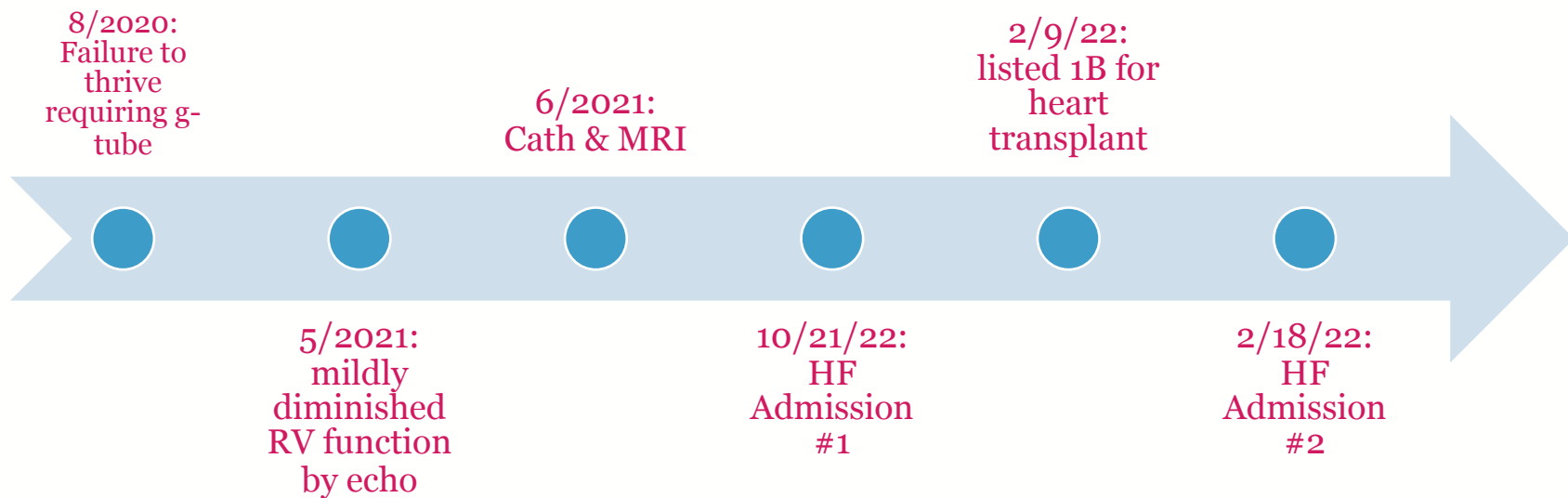
INTERSTAGE PERIOD

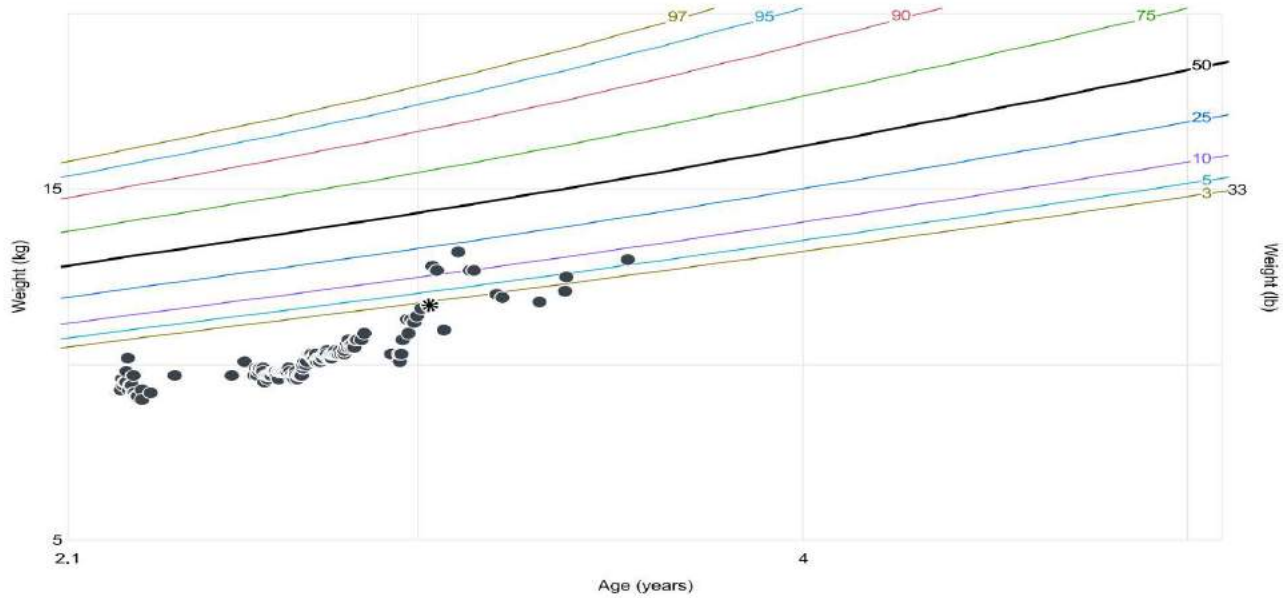
- Inpatient
- 9/9/19: diagnostic catheterization for failure to progress
 - Pulmonary vein desaturations
 - Elevated RVEDP of 12mmHg
- Ectopic atrial arrhythmia (EAT)
- Prolonged Milrinone therapy x3 mo
- Infection with Serratia: UTI, respiratory, PICC line
- Transaminitis of unclear etiology

STAGE 2

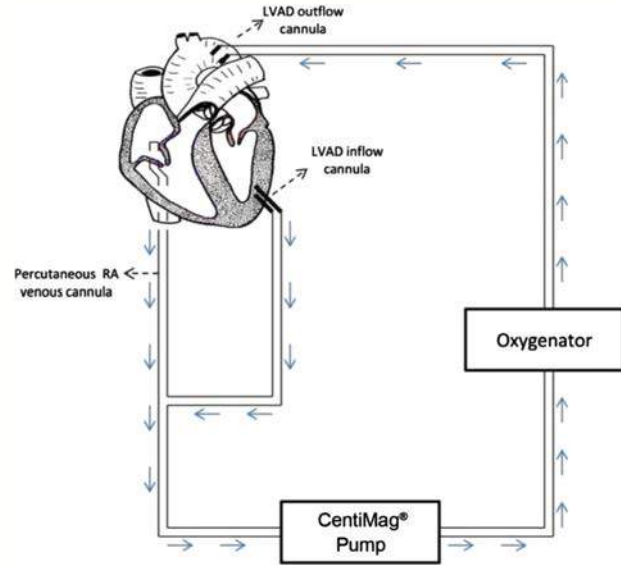
- 12/5/19: bidirectional Glenn, Sano takedown
- Postop echocardiogram showed mildly diminished RV function, trivial TR, patent Glenn shunt, mildly hypoplastic RPA to the left of Glenn
- No recurrence of EAT
- Discharged from hospital after ~ 2 weeks
- At discharge:
 - Medications: enalapril, bumex, diuril, spironolactone, amiodarone
 - RA
 - NG feeds

STAGE 2 CONT.

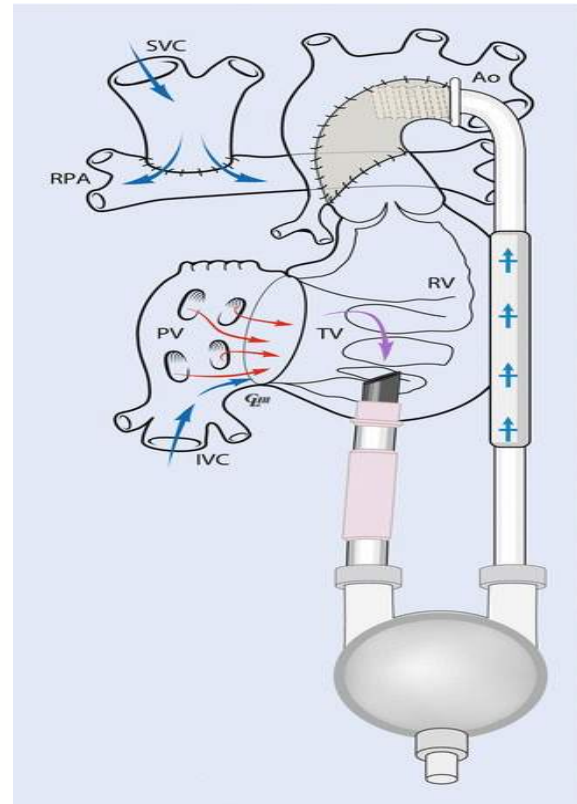




LVAD

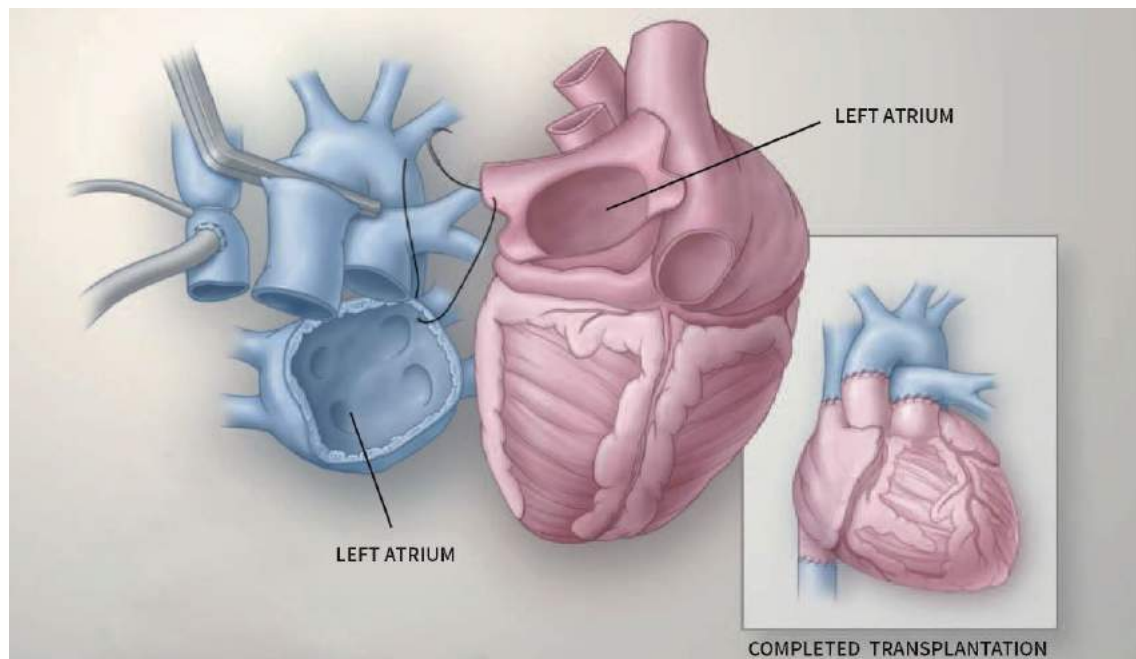


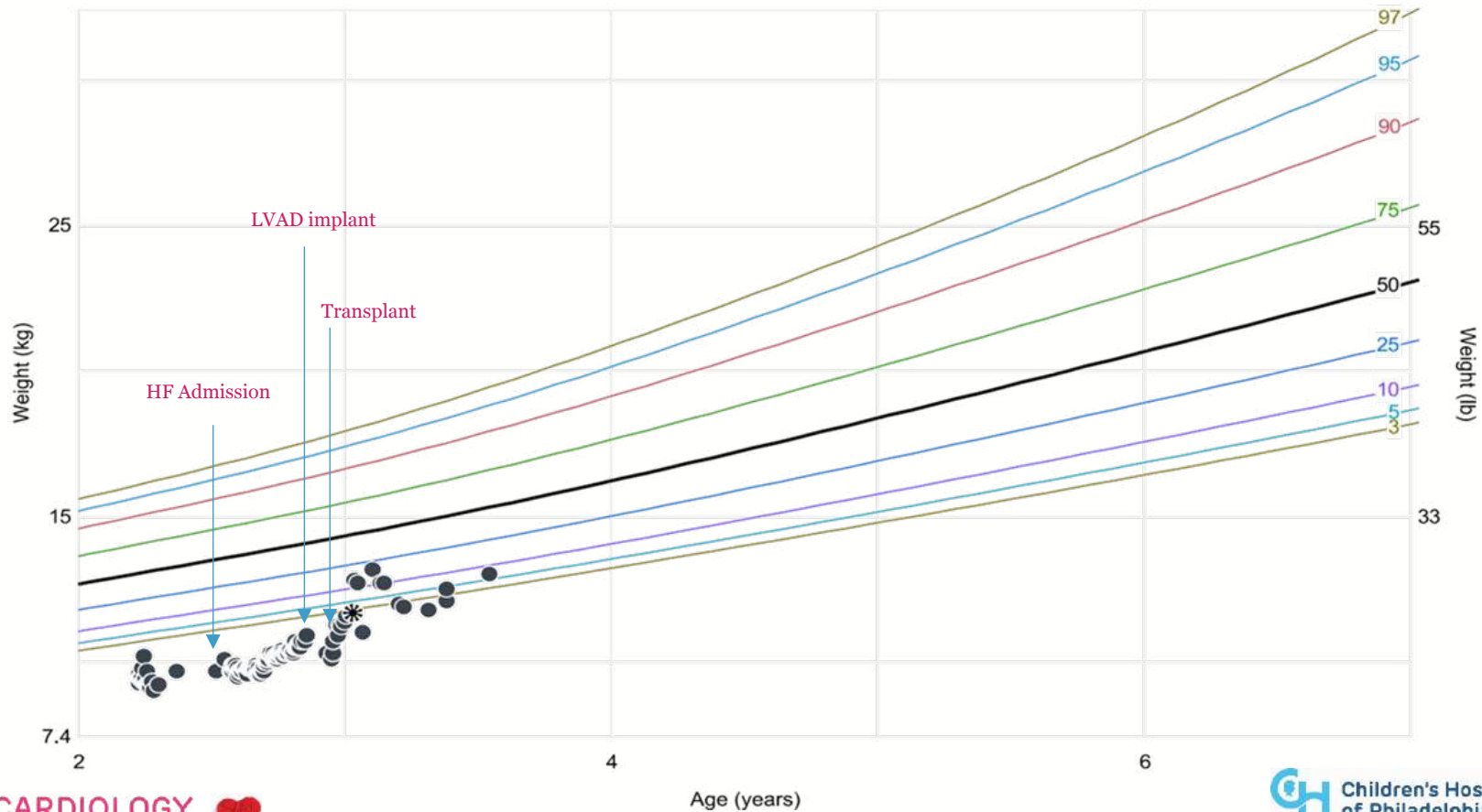
Shekar, K., Mullany, D.V., Thomson, B. *et al.* Extracorporeal life support devices and strategies for management of acute cardiorespiratory failure in adult patients: a comprehensive review. *Crit Care* **18**, 219 (2014).
<https://doi.org/10.1186/cc13865>



2017. Fig. 38.2 Schematic view of UVAD placement in single ventricle anatomy after second-stage palliation (Glenn circulation) of HLHS. The inflow cannula is inserted in the apex of the single right ventricle and the outflow cannula at the level of the Damus-Kaye-Stansel anastomosis. Ventricular Assist Device Support for Hypoplastic Left Heart Syndrome, Fontan Failure, and End-Stage Systemic Right Ventricular Dysfunction <https://thoracickey.com/ventricular-assist-device-support-for-hypoplastic-left-heart-syndrome-fontan-failure-and-end-stage-systemic-right-ventricular-dysfunction/>

AFTER 9 DAYS ON LVAD...





LESSONS LEARNED

- It is possible to bridge patients with Glenn physiology with a combined continuous and pulsatile VAD strategy to transplant
- Consider earlier LVAD to improve HF symptoms

