



# Cardiac Sonographer Network News

1.800.443.9898 [childrenshospitalofil.org](http://childrenshospitalofil.org)

## Welcome

## Number 7

Welcome to the newsletter created just for you: sonographers who perform pediatric echocardiograms in primarily adult echo labs. Each issue features tips on echocardiography of congenital heart disease, short case reports, congenital heart center news, and information on upcoming educational programs.

In an effort to be “green,” we send this newsletter as an electronic file. If you or any of your colleagues would like to be on our distribution list, please send an email to:

[gregory.b.frary@osfhealthcare.org](mailto:gregory.b.frary@osfhealthcare.org)

Please include your name and facility affiliation.

Copies of all our newsletters can also be accessed on our website at <http://www.childrenshospitalofillinois.org>. Click on “Services and Clinics” in the middle then under “Specialty Services”, click on “Cardiology/Congenital Heart Center”, then under “Programs”, click on “Sonographer Newsletters”.

We want you to be successful in performing studies even on newborns that may have critical heart disease. After all, prompt diagnosis and emergency treatment will yield the best outcome for our patients. If you have any questions regarding necessary views or anatomy while doing an emergent echo, please call the Congenital Heart Center “on call” cardiologist. They will always be glad to speak with you. The “on call” cardiologist can be reached by calling 309.655.7257 or 309.624.9188.

Regional Educational Opportunities Coming Up....

Carle Clinic Echo Symposium Saturday October 15, 2016

<https://www.carleconnect.com/classes-and-events/conferences/2016/ECHO-Symposium>

Saint John's Hospital Spring Symposium March 4, 2017

Details coming

## Sonographer Tip

# Pulmonary Artery Systolic Pressure (PASP) and Right Ventricular Systolic Pressure (RVSP) Derived From the Tricuspid Regurgitation (TR) Jet

In the absence of pulmonary valve stenosis, the pulmonary artery systolic pressure can be calculated using the TR peak velocity. If the patient has pulmonary stenosis, the TR jet will yield the RVSP and NOT the PASP.

It is EXTREMELY important to obtain a FULL SPECTRUM TR jet to accurately reflect the pressure drop across the tricuspid valve during systole. The two variables are the strength of the Doppler signal and the angle of incidence to the TR jet. If either of these are deficient, an accurate full spectrum TR jet is difficult.

A full spectrum TR jet has three components; 1-onset of the signal at the beginning of systole, 2- a rounded contour at peak systole, 3- end of the signal at end systole. (See Fig.1)

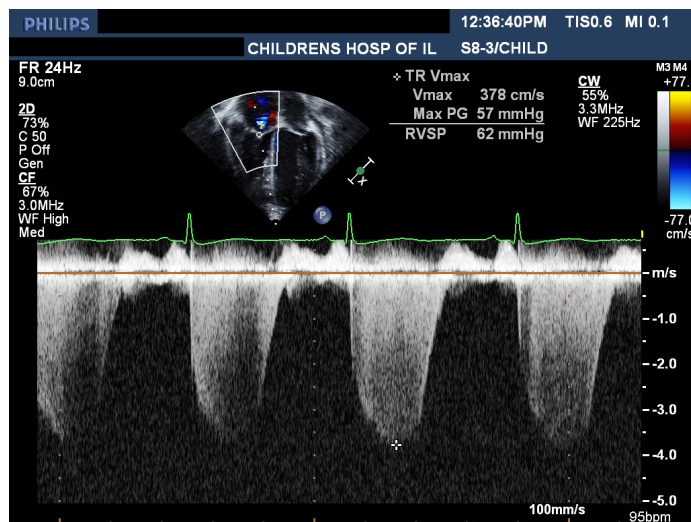


Figure 1

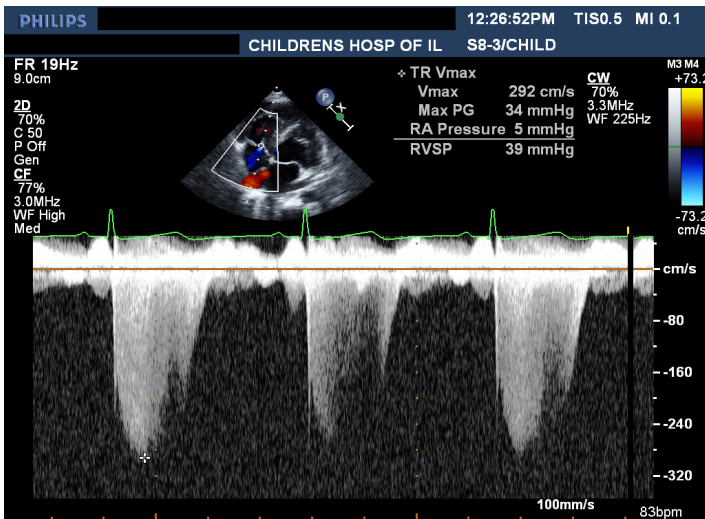


Figure 2

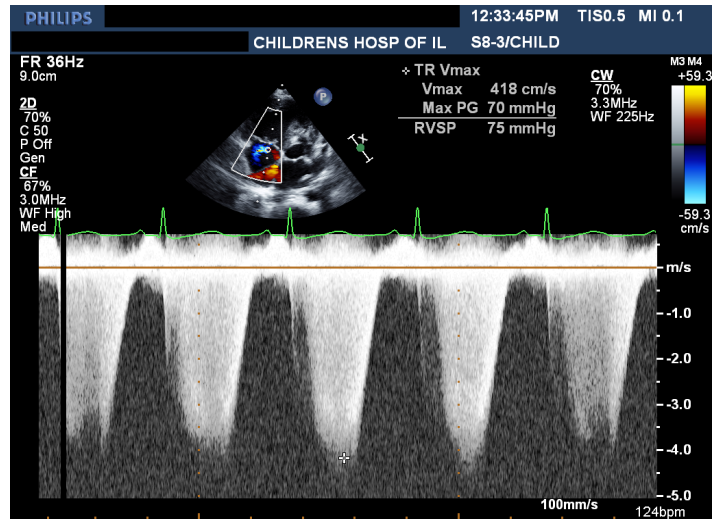


Figure 3

Figure 2 and 3 are full spectrum TR jets on the same patient with slightly different angulation. Note the extremely different velocities and RVSP.

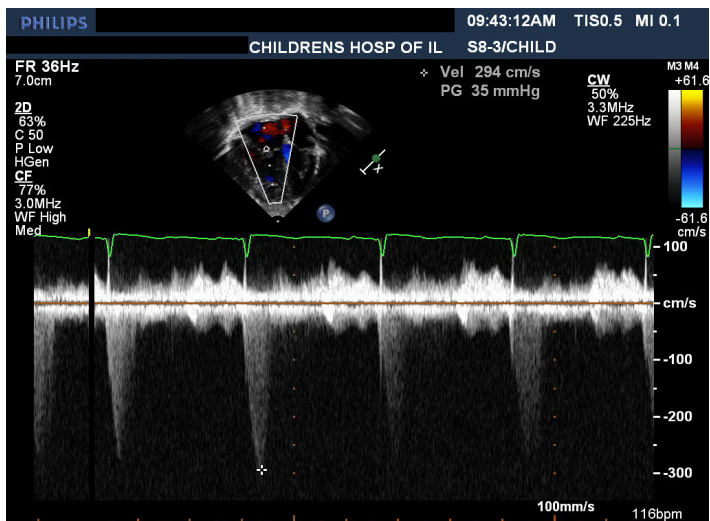


Figure 4

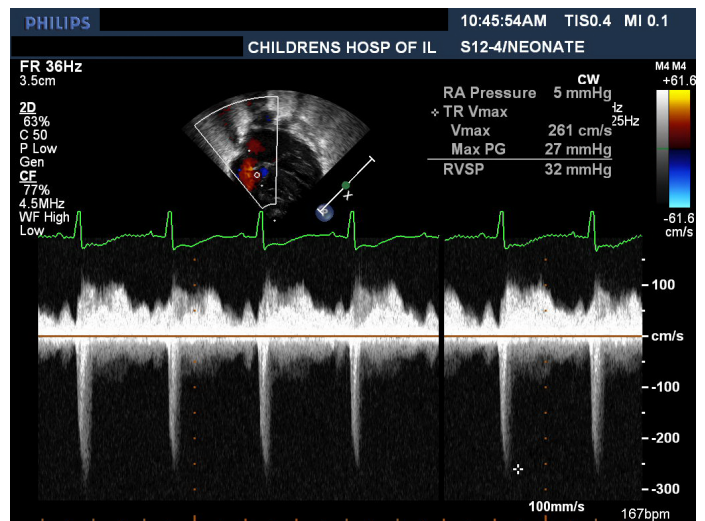


Figure 5

Figures 3 and 4 are incomplete spectrum jets. The measurements are just a guess and are probably way too low.