

VEVO 3100 Mouse Cardiovascular Core

Division of Cardiovascular Disease Department of Medicine,

University of Alabama at Birmingham

Core director: Ganesh V. Halade, email: mousecardiocore@uabmc.edu



Core Mission

The mouse cardiovascular core's mission is to support cardiac function measurements (contractility, strain and synchronicity) and provide consultation on data analysis and study design.

Naïve Control

LONG A

Myocardial Infarction

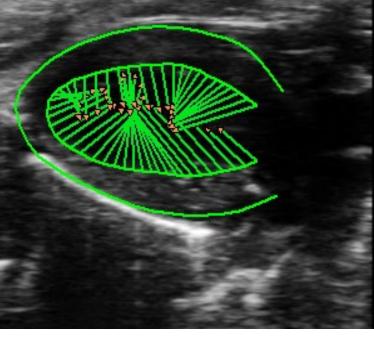
M-mode

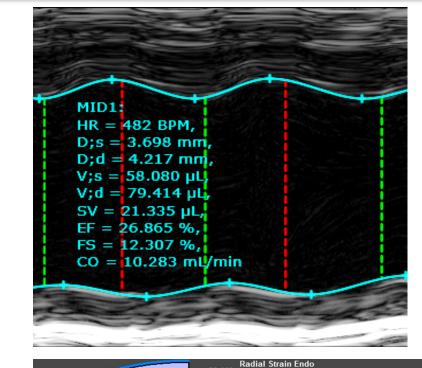
B-mode

Ve Control:

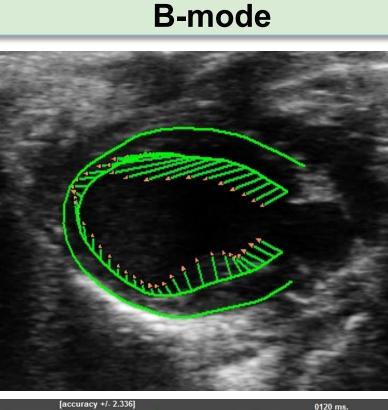
467 BPM,

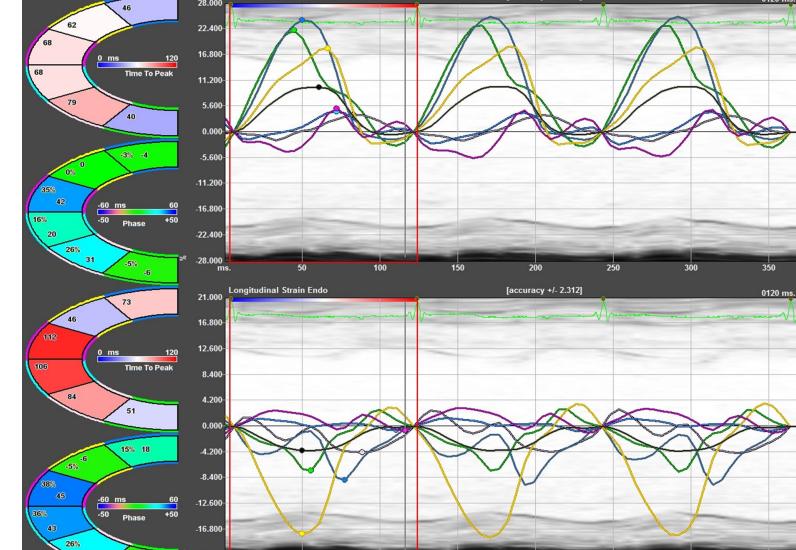
2.567 mm,





M-mode





- Strains
- Longitudinal strain (Long axis B-mode)
- Circumferential strain (short axis B-mode)
- Regional synchronicity

VEVO 3100



Core Charges

Self-service	\$80.00/hr
Full-service	\$125.00/hr
Non-UAB full service	\$250.00/hr

Core Location and Contact

Zeigler Research Building 305A
Dr. Ganesh Halade ZRB 310A
mousecardiocore@uabmc.edu
Constance Brown,, ZRB 310
constancebrown@uabmc.edu

Core Tools

Vevo 3100 Echocardiography (VisualSonics Inc. Canada) equipped with MX400, 22-55 MHz transducer, axial resolution 50µm allows crucial visualization and analysis of murine cardiovascular function, granting novel possibilities in cardiology research.

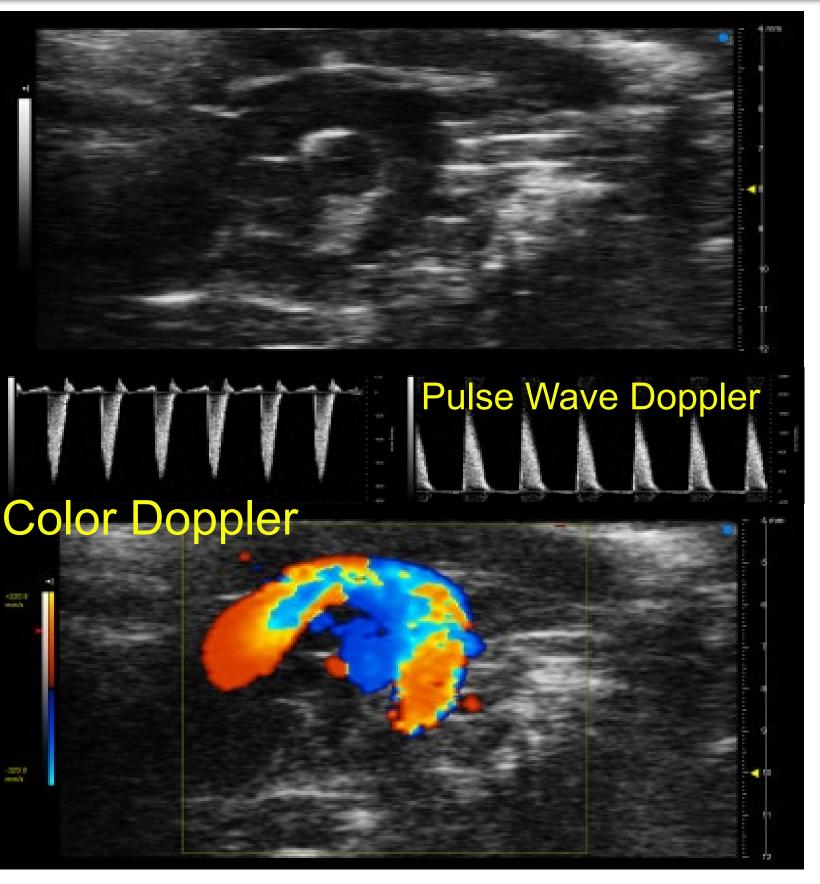
Naïve Control

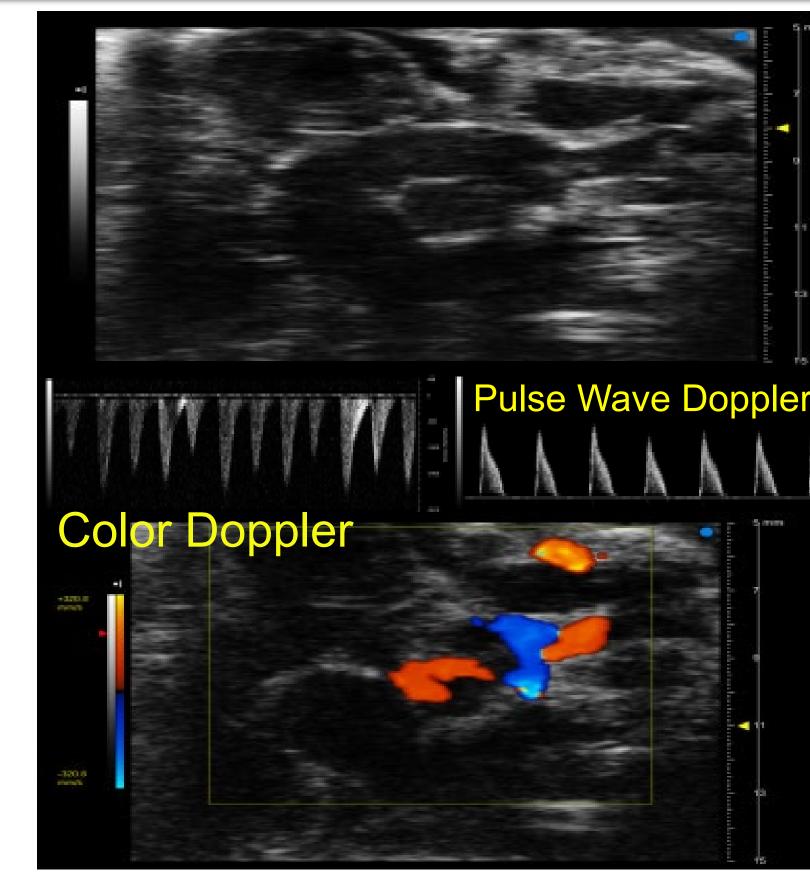
B-mode

Aortic Arch View

Post -TAC

B-mode





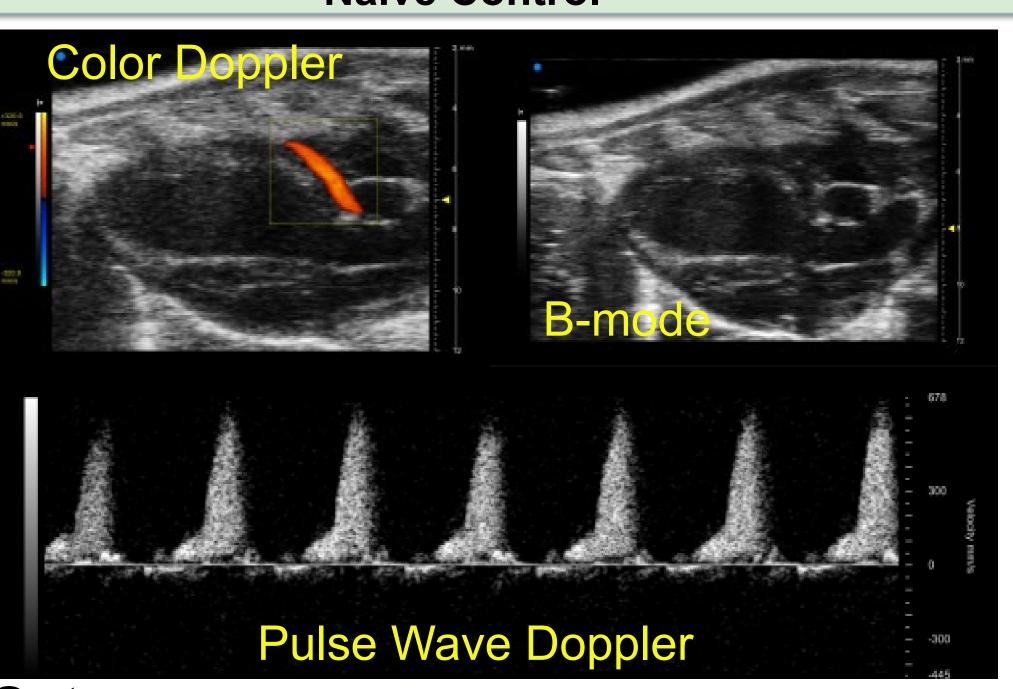
Outcome:

- Ascending Flow (mm/s)
- Left ventricle function

- Descending Flow (mm/s)
- Pressure gradient (mmHg)

Parasternal Long Axis View

Naïve Control



Outcome:

Outcome

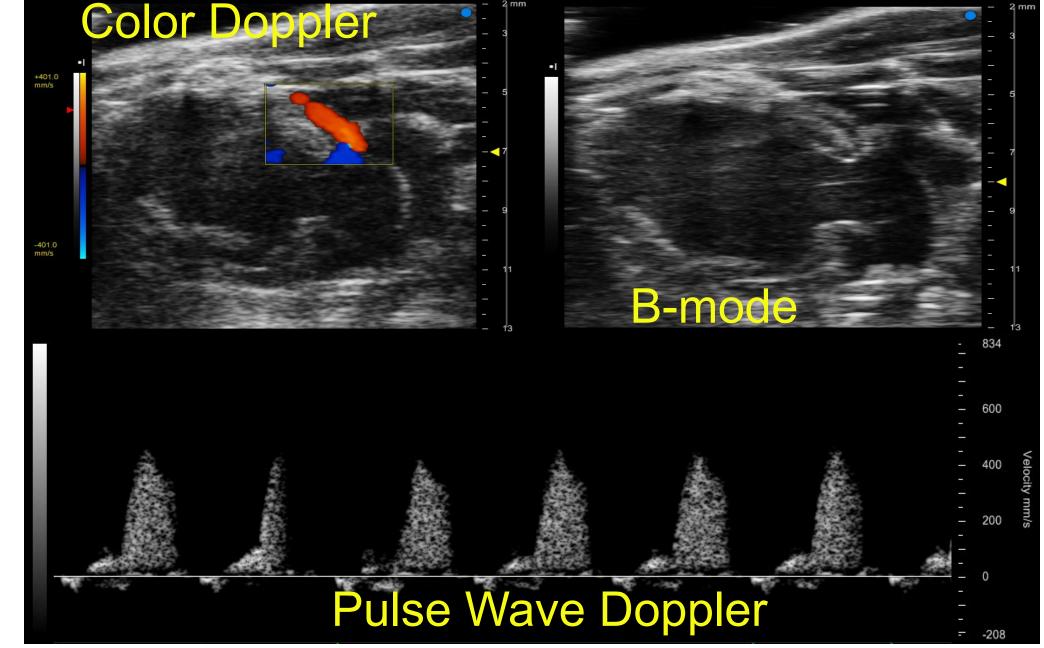
Fractional Shortening

End systolic and diastolic volume

End systolic and diastolic dimension

Coronary Flow (mm/s)

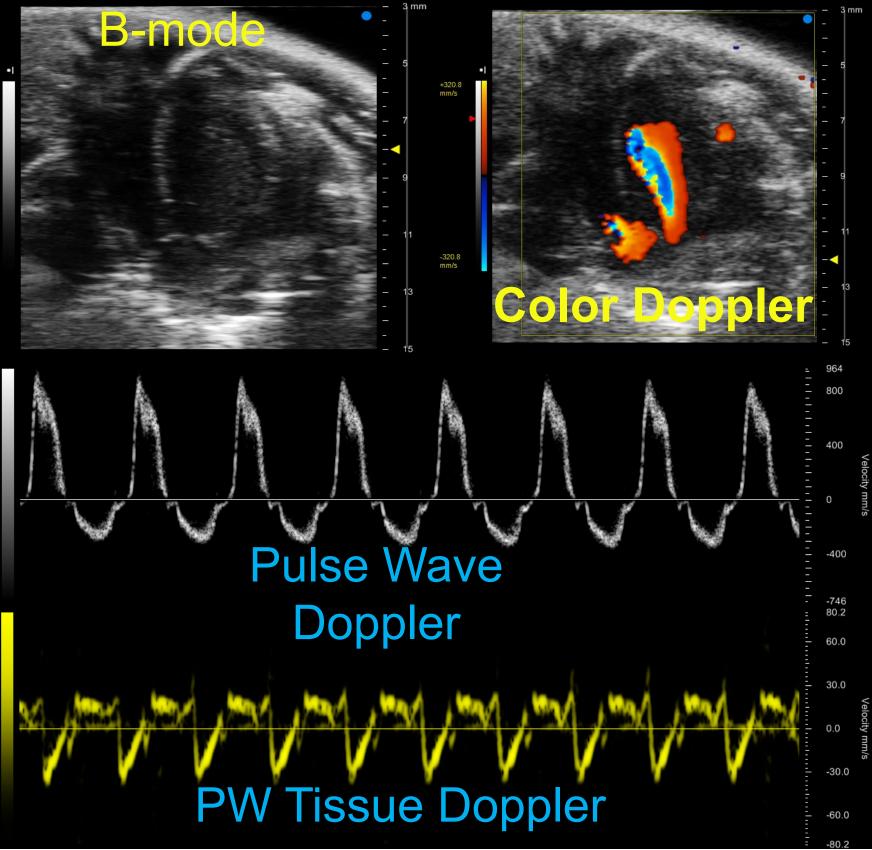
Myocardial Infarction



- Left anterior descending coronary artery (LAD)
- Color Doppler analysis

Apical Four Chamber View

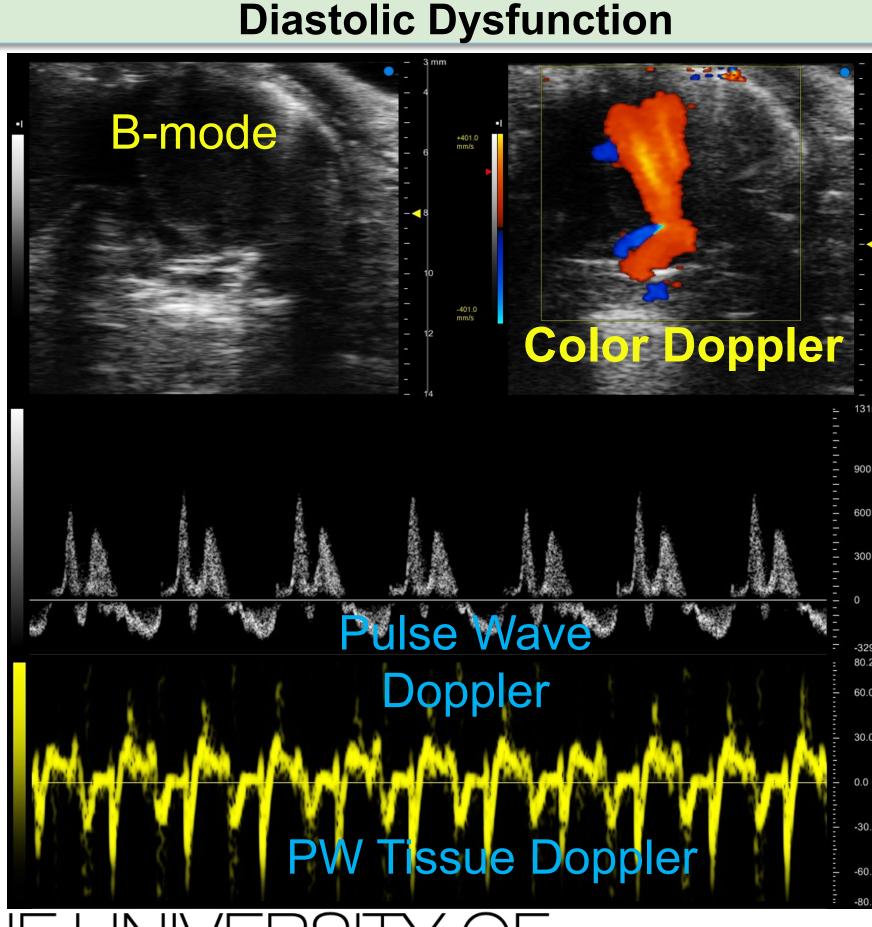
Naïve Control



<u>Outcome:</u>

Diastolic function (Mitral valve E wave to A wave ratio

- E/A
- E'/A'
- IVRT
- IVCT





G. V. Halade et al. Heart functional and structural compendium of cardiosplenic and cardiorenal networks in acute and chronic heart failure pathology. American journal of physiology. Heart and circulatory physiology 314, H255-H267 (2018).