

Cardiac Auscultation in Y2K?

W. Thornton, M.D.
Division of Cardiology
UTMB



Background

- Increased medical technology
- Decreased emphasis on physical diagnosis
- Decreased opportunity for student practice



Heart Sounds vs Carotid Pulse

Heart Sounds



Palpated Pulse



Cardiac Sounds

● Heart Sounds



● Murmurs

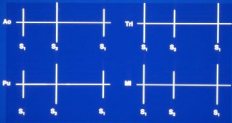


● Extra Cardiac Sounds

Normal Variant Heart Sounds

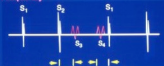


Normal Heart Sounds vs. Auscultatory Areas, Typical



$S_{3,4}$ Characteristics

- Low Frequency

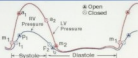


- Widely "split" (separated) from S_1 or S_2

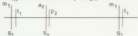
- Have a rhythm, "gallop"



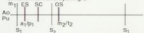
Basic Heart Sounds



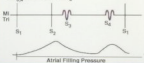
1. $S_{1,2}$ Valve Closure and Spilling



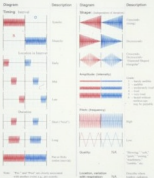
2. Abnormal Valve Opening



3. $S_{3,4}$ Ventricular Filling



Investigating Leadership in Rural Hospitals and Clinics



Systolic vs Diastolic Answer Sheet

10 Feb, 2000

A. Sounds Only

	Systolic?	Diastolic?
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____

B. Sounds plus "Pulse"

	Systolic?	Diastolic?
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____

Systolic vs Diastolic Answer Sheet **10 Feb, 2000**

A. Sounds Only

	Systolic?	Diastolic?	
1.	<u> X </u>	<u> </u>	15/4
2.	<u> </u>	<u> X </u>	10/0
3.	<u> </u>	<u> X </u>	10/0
4.	<u> X </u>	<u> </u>	20/0
5.	<u> X </u>	<u> </u>	20/0
6.	<u> </u>	<u> X </u>	4/0

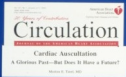
B. Sounds plus "Pulse"

	Systolic?	Diastolic?	
1.	<u> </u>	<u> X </u>	10/0
2.	<u> </u>	<u> X </u>	10/0
3.	<u> X </u>	<u> </u>	15/4
4.	<u> X </u>	<u> </u>	20/0
5.	<u> X </u>	<u> </u>	20/0
6.	<u> </u>	<u> X </u>	4/0



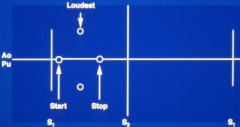
Problem

- Current auscultatory abilities poor at all levels



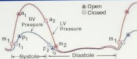
Ejection Murmurs

Critical Points

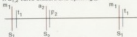




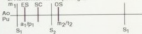
Basic Heart Sounds



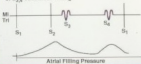
1. $S_{1,2}$ Valve Closure and Spitting



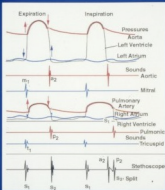
2. Abnormal Valve Opening &



3. $S_{3,4}$ Ventricular Filling



Generation of Normal Heart Sounds, $S_{1,2}$ and Respiratory Splitting of S_2





● = 0 mmHg

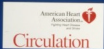






Problem

- Current auscultatory abilities poor at all levels



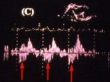
- Value of and need for auscultatory abilities remain



(A)



(B)



(C)



