

# Echo-Morphology of the Normal Heart

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Imperial College

www.rbht.nhs.uk/Morphology

Royal Brompton & Harefield

NHS

# Echo-Morphology of the Normal Heart

## Relationships of cardiac chambers and vessels



Imperial College

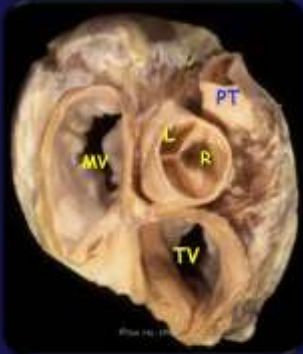
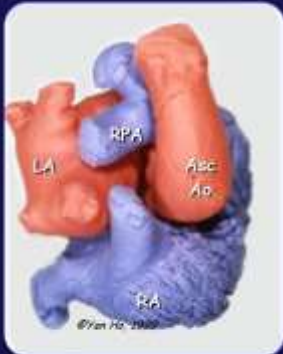
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# Echo-Morphology of the Normal Heart

## Valves



Imperial College

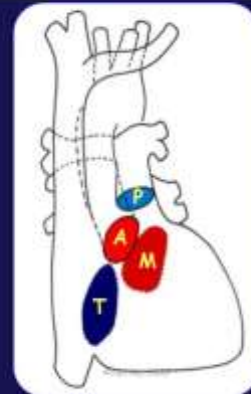
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# Echo-Morphology of the Normal Heart

## Valves



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# Echo-Morphology of the Normal Heart

## Chambers: atrial appendages



Right Atrium

Left Atrium

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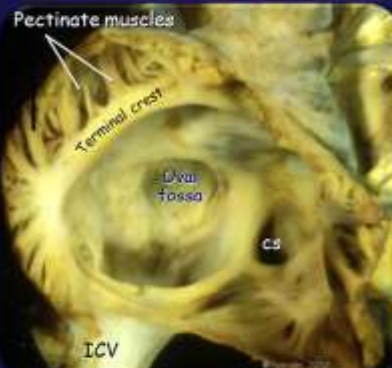
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# Echo-Morphology of the Normal Heart

## Chambers: atria



Right Atrium

Left Atrium

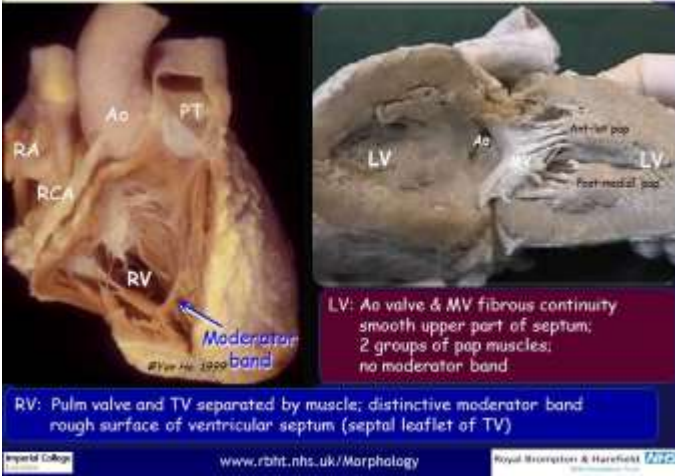
Imperial College

www.rbht.nhs.uk/Morphology

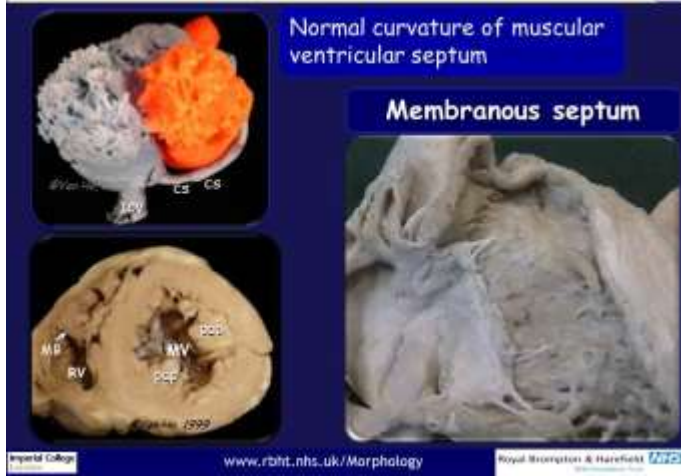
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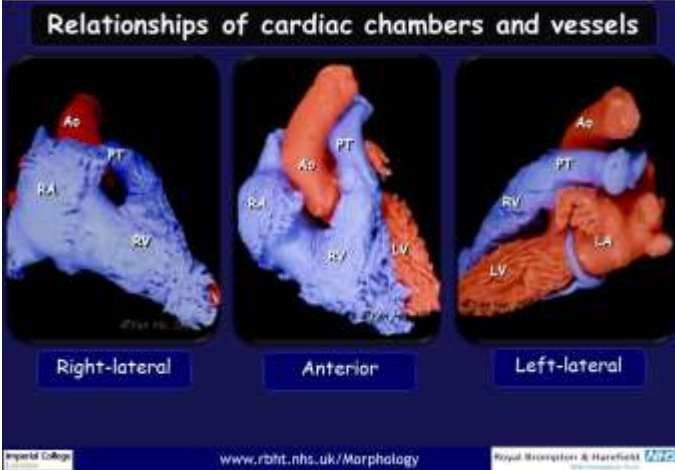
## Echo-Morphology of the Normal Heart



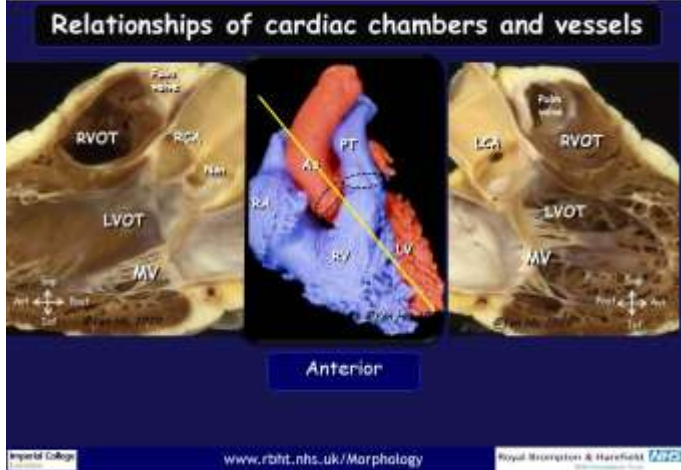
## Echo-Morphology of the Normal Heart



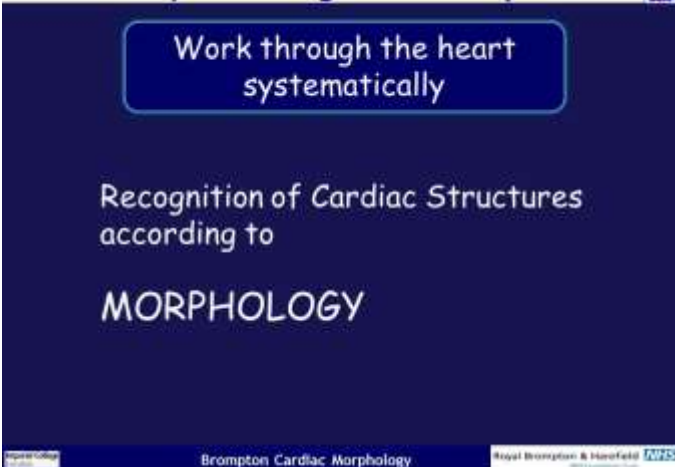
## Echo-Morphology of the Normal Heart



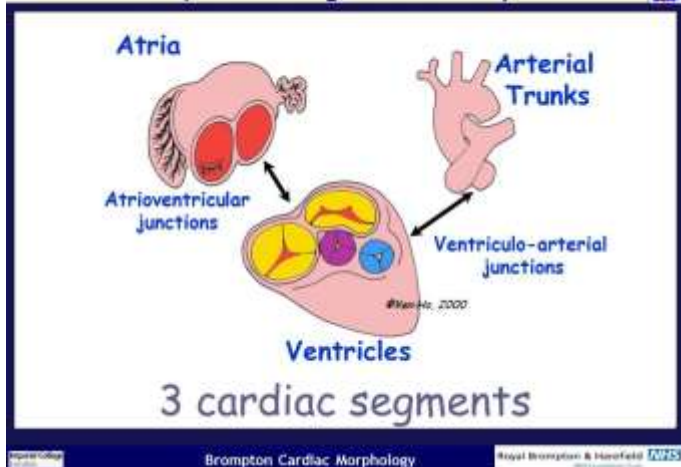
## Echo-Morphology of the Normal Heart



## Sequential segmental analysis



## Sequential segmental analysis





## Sequential segmental analysis



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## Sequential segmental analysis

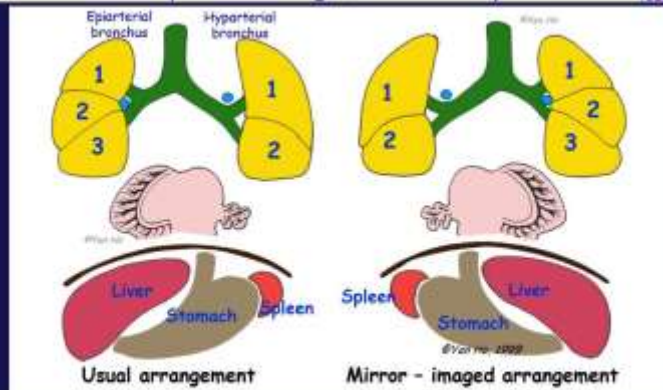
### ARRANGEMENT OF ATRIAL APPENDAGES



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## Sequential segmental analysis

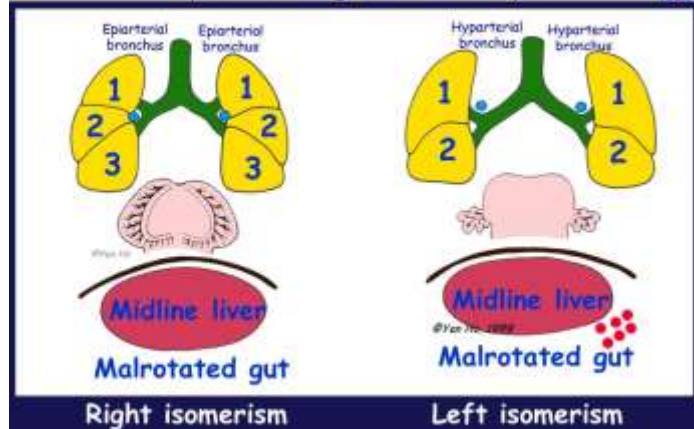


### Atrial arrangement

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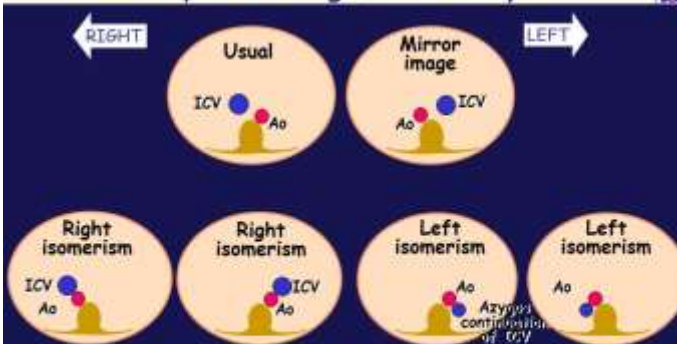
## Sequential segmental analysis



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## Sequential segmental analysis

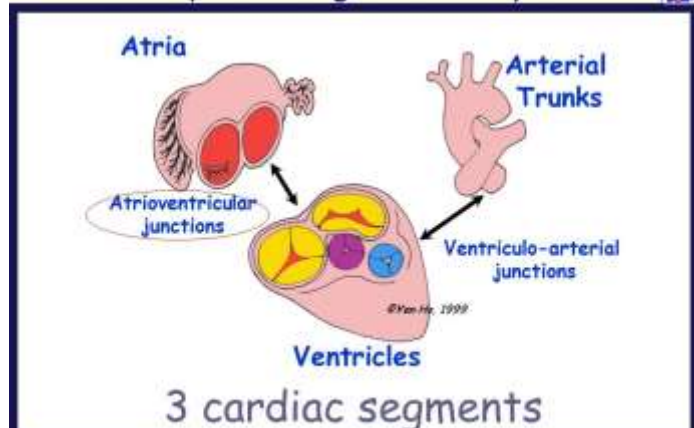


### Relationship of abdominal vessels at ~ T10

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## Sequential segmental analysis



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## Sequential segmental analysis



Biventricular  
atrioventricular connections



Univentricular  
atrioventricular connections

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## Sequential segmental analysis



Biventricular  
atrioventricular connections

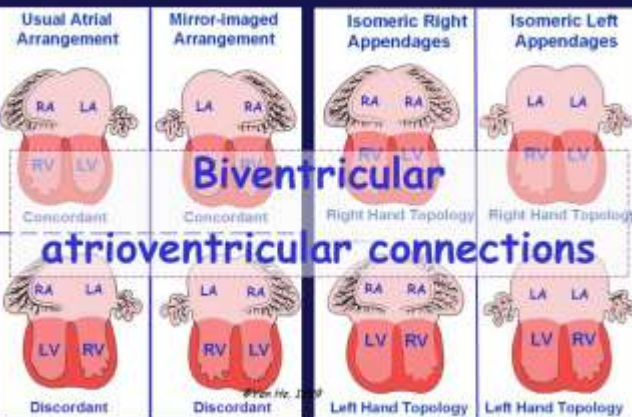
The atria are connected to  
2 ventricles

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## Sequential segmental analysis

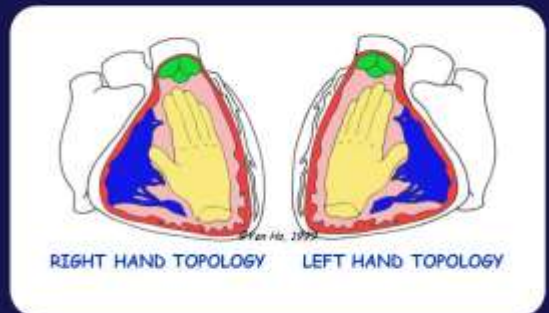


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## Sequential segmental analysis



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## Sequential segmental analysis



Univentricular  
atrioventricular connections

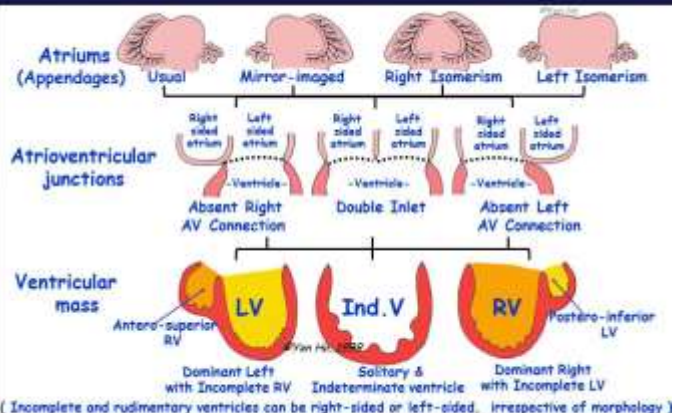
The atria are connected to  
1 ventricle

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## Sequential segmental analysis



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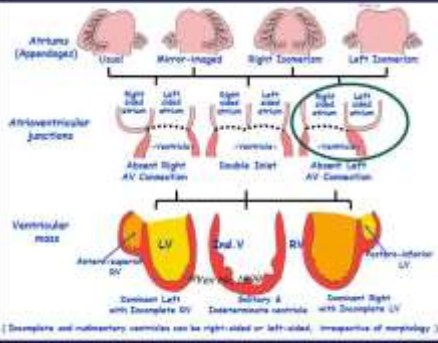
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## Sequential segmental analysis

### Absent Left Univentricular AV connections

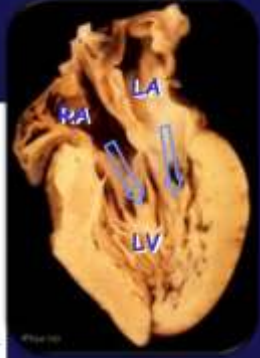
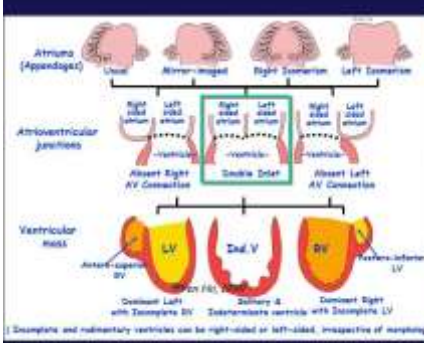


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## Sequential segmental analysis

### Double Inlet Univentricular AV connections

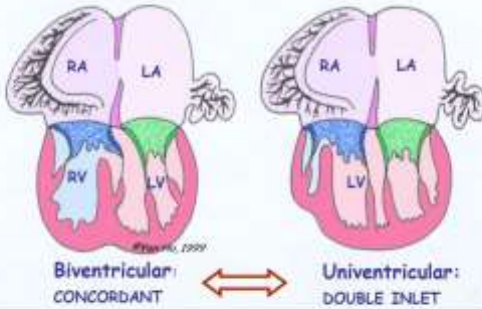


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## Sequential segmental analysis

### ATRIOVENTRICULAR CONNECTIONS

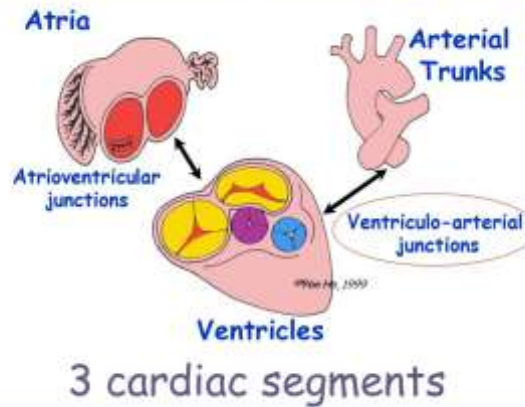


Overriding valve - a spectrum of AV connections

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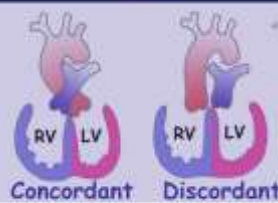
## Sequential segmental analysis



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## Sequential segmental analysis



### Double outlet ventricles

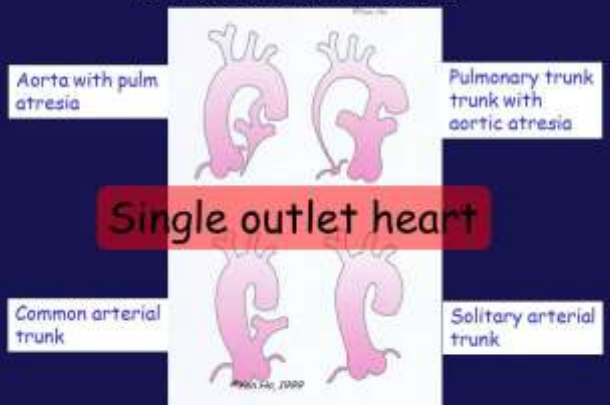


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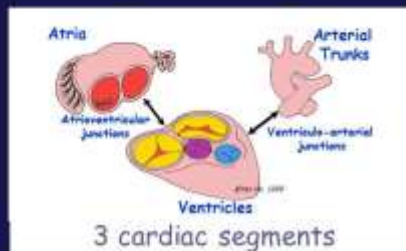
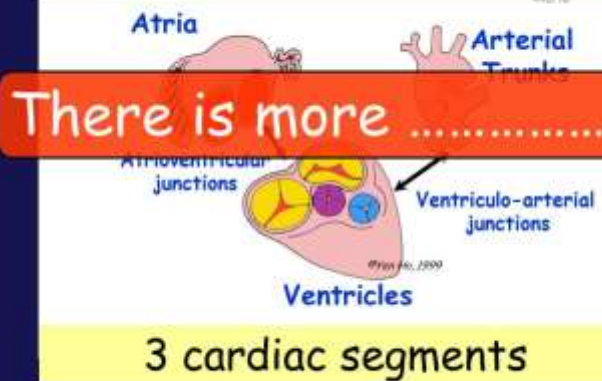
## Sequential segmental analysis

### Ventriculo-arterial connections



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.... list associated malformations

.... list associated malformations

e.g. ASD, VSD, coarctation, mitral stenosis, Ebstein malformation, anomalous pulmonary vein, etc.....

And location of heart, location of cardiac apex

Morphological analysis  
It is easy !!

Describe what you see.

WYSIWYG

What you see is what you get

Echocardiography in Congenital Heart Disease Made Simple

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