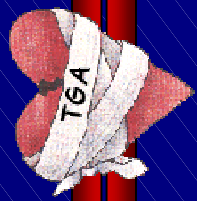
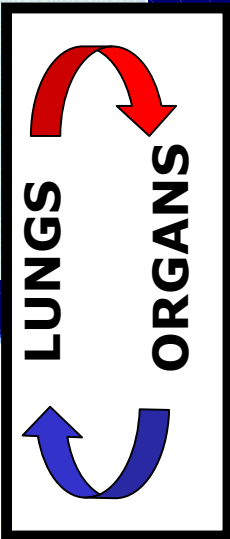
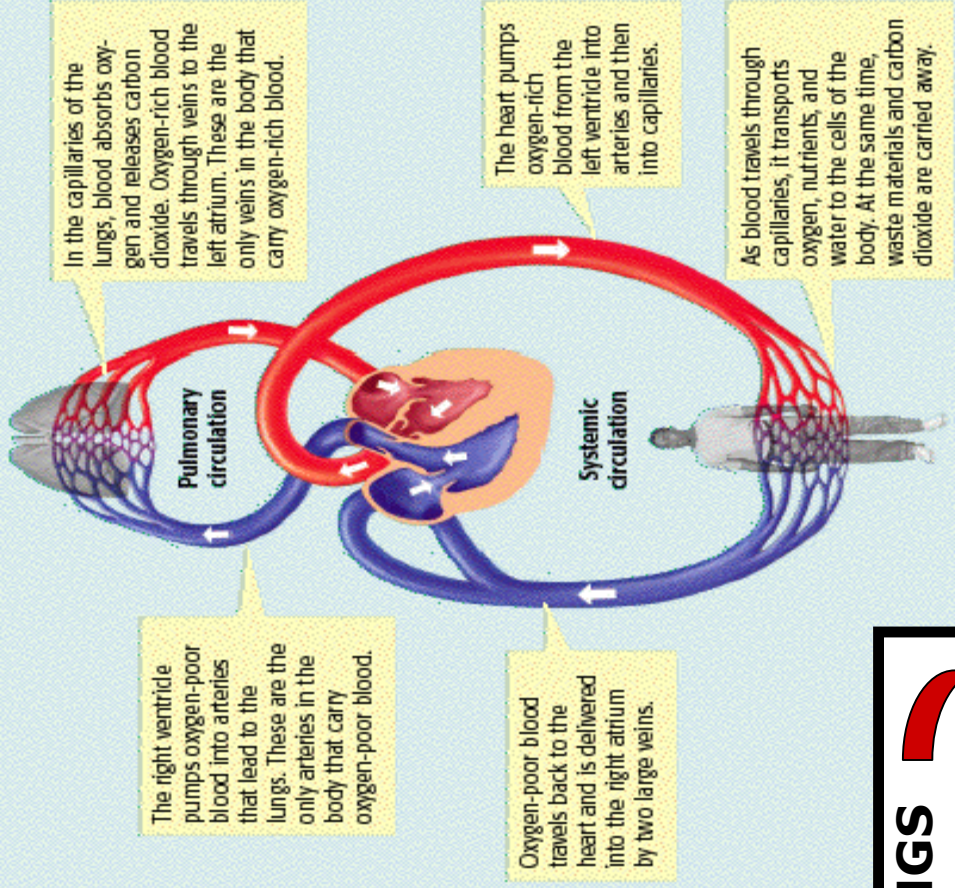
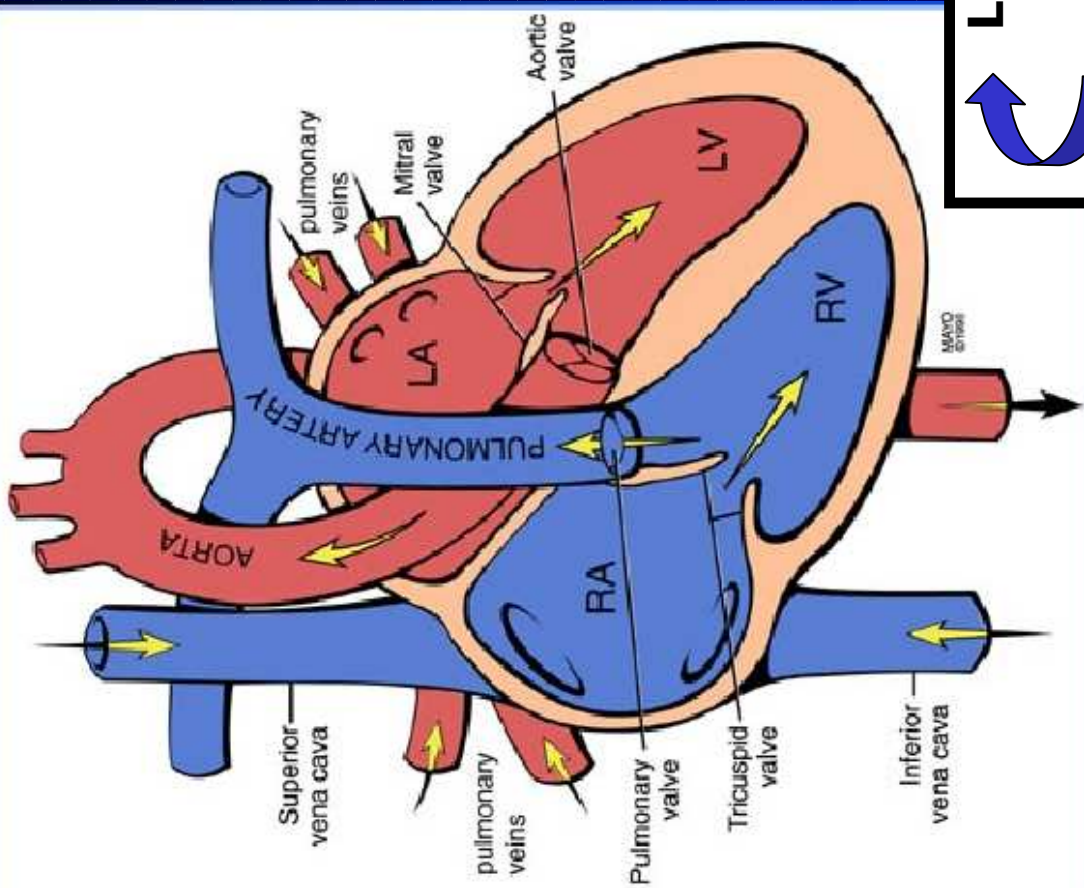


# **TRANSPOSITION OF GREAT ARTERIES: ATRIAL SWITCH**

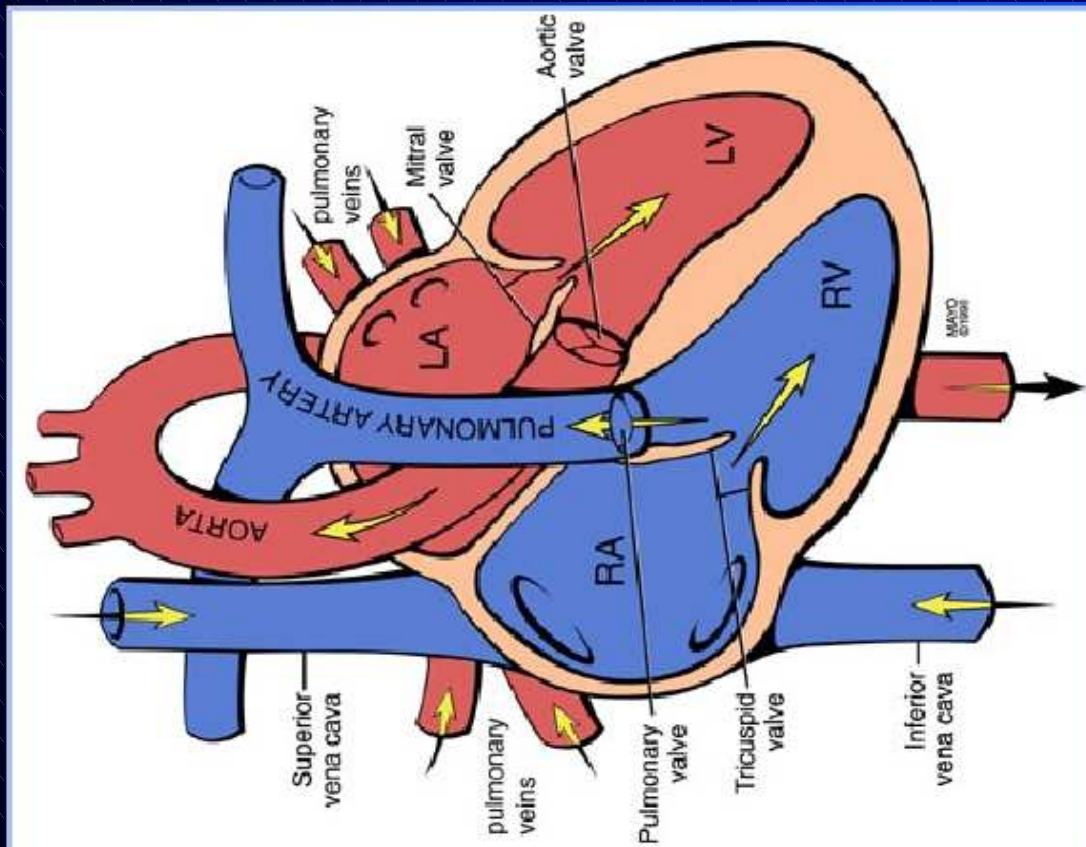
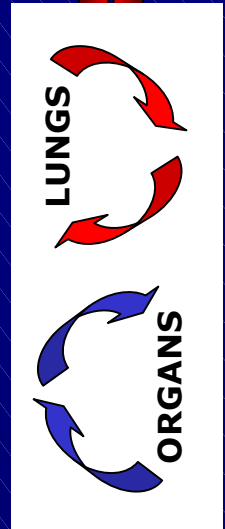
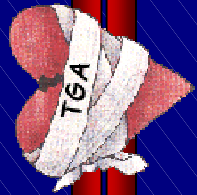
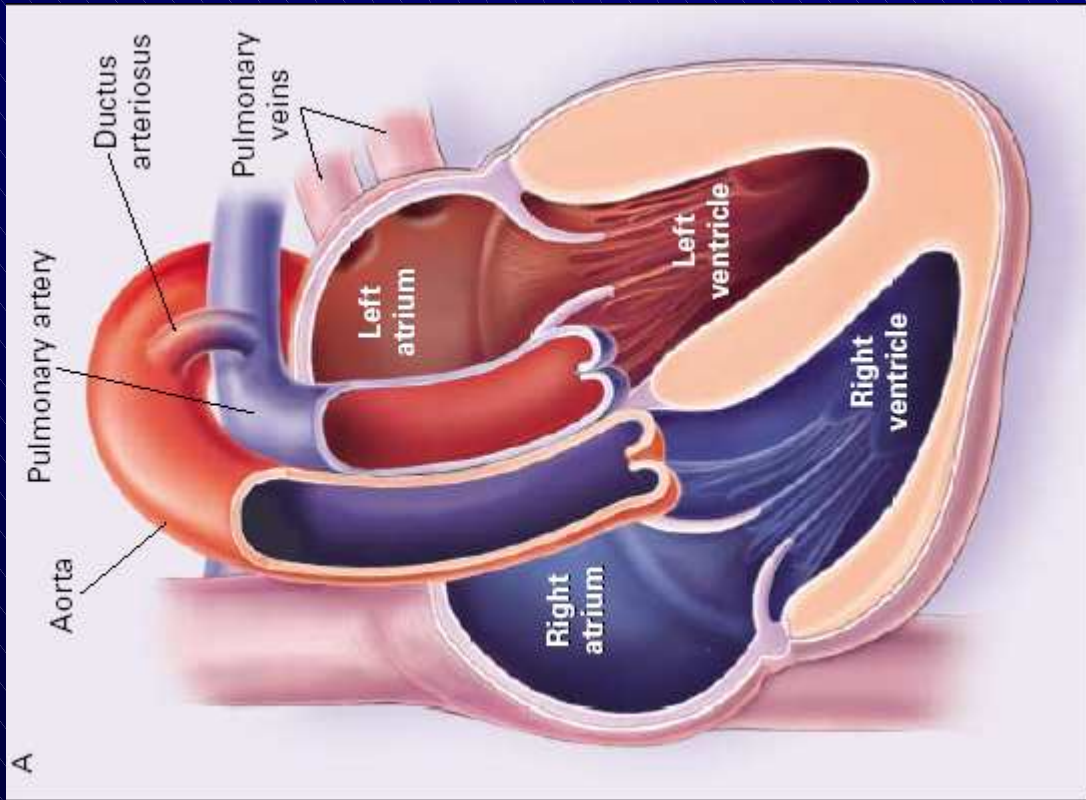
**Dr. Laura Dos-Subira  
Clinical Research Fellow  
TCCCA**

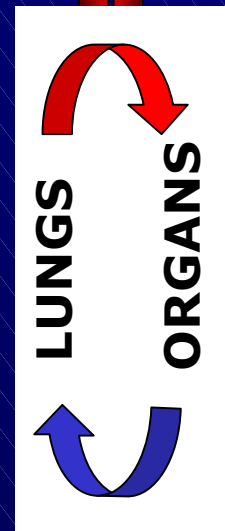
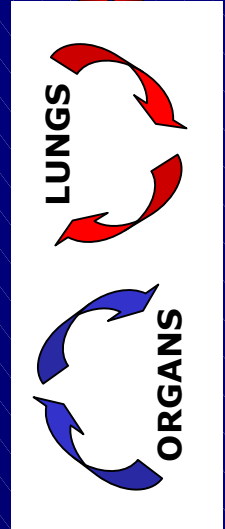
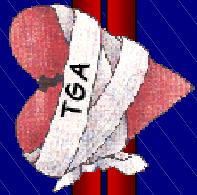
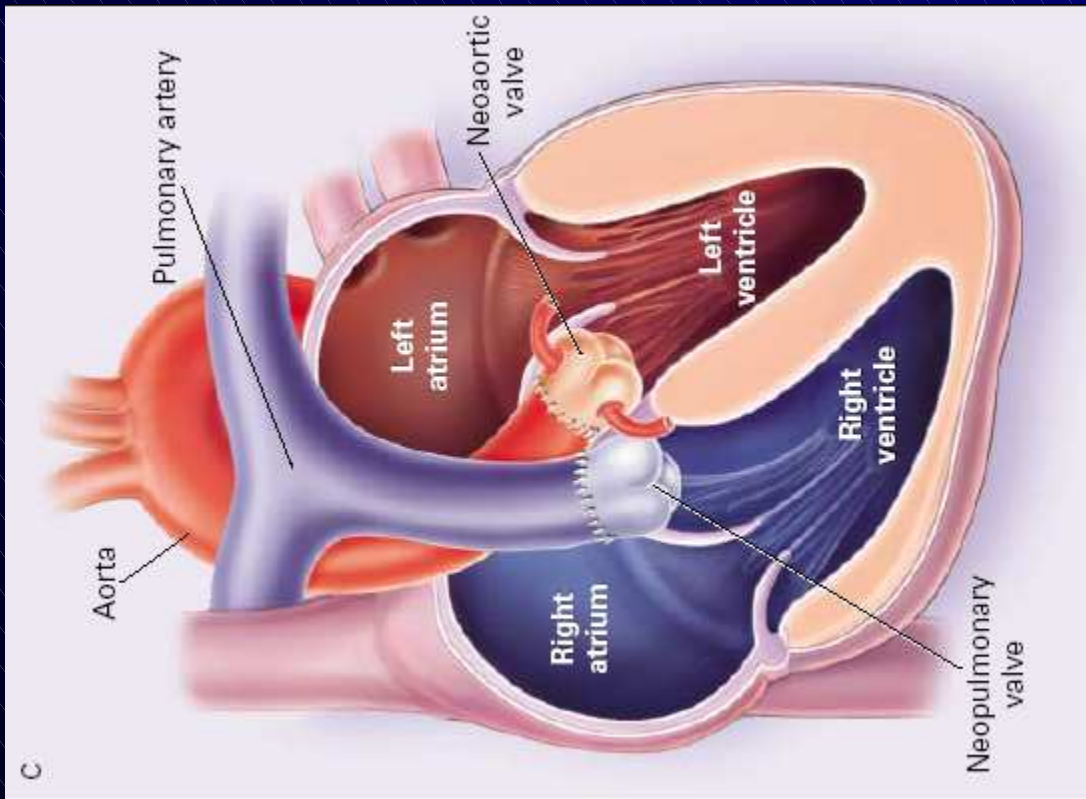
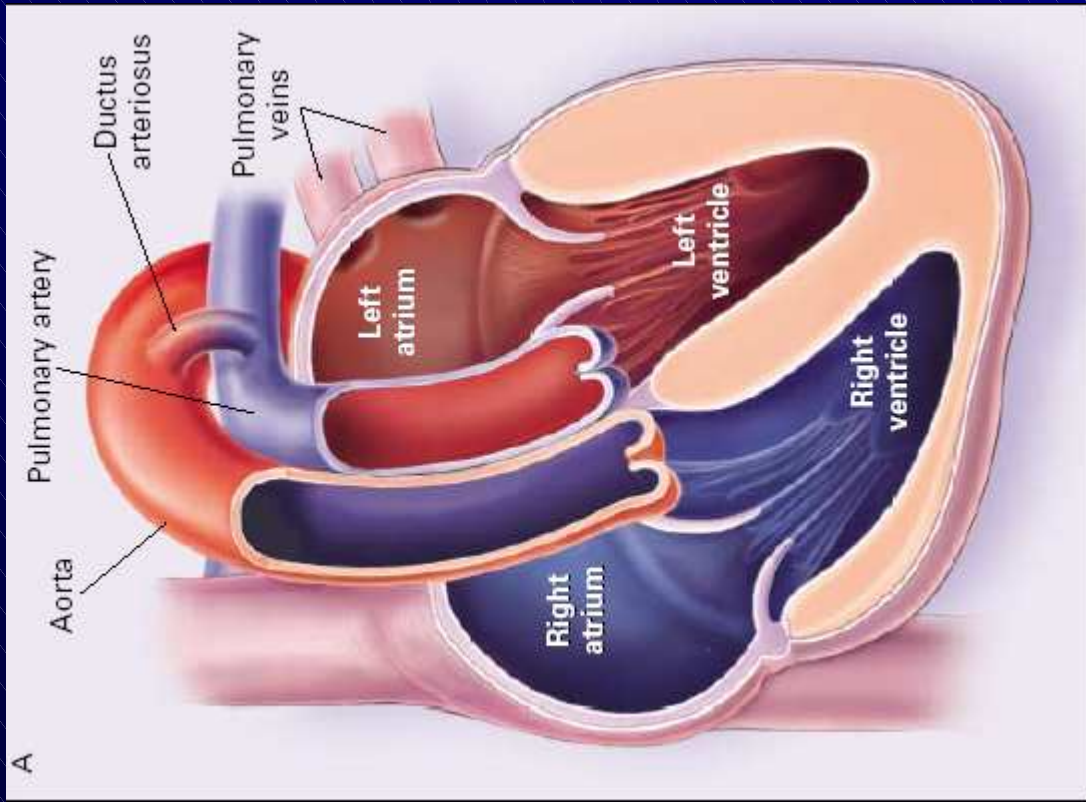


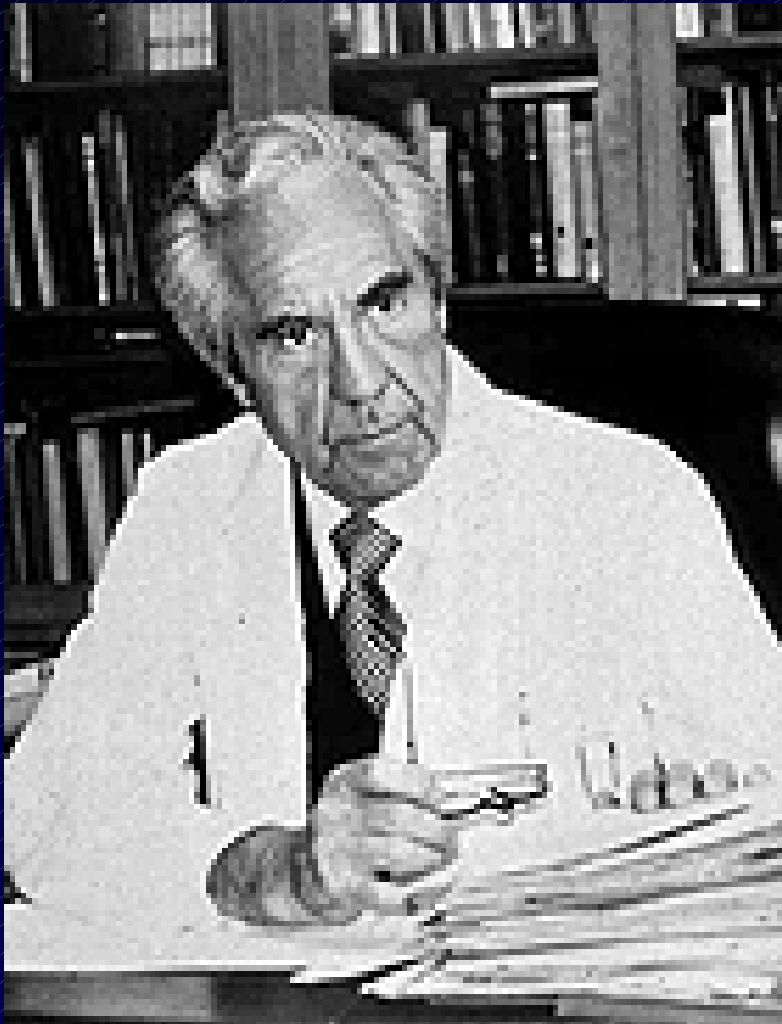


# NORMAL CIRCULATION









- Born 1915 in Rattvik (Sweden).
- Practiced in many surgical fields.
- 1958 implanted first cardiac PM.
- 1964 began renal transplantation.
- 1968 first european cardiac transplantation.

**1958: invented  
atrial switch  
repair for TGA.**



**Dr. Ake Senning (1915-2000)**

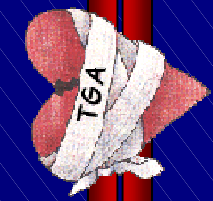
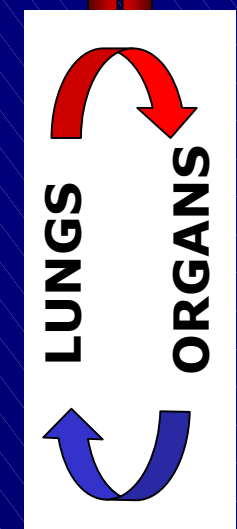
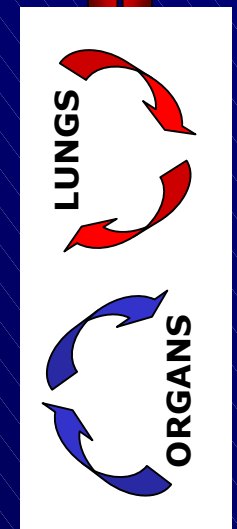
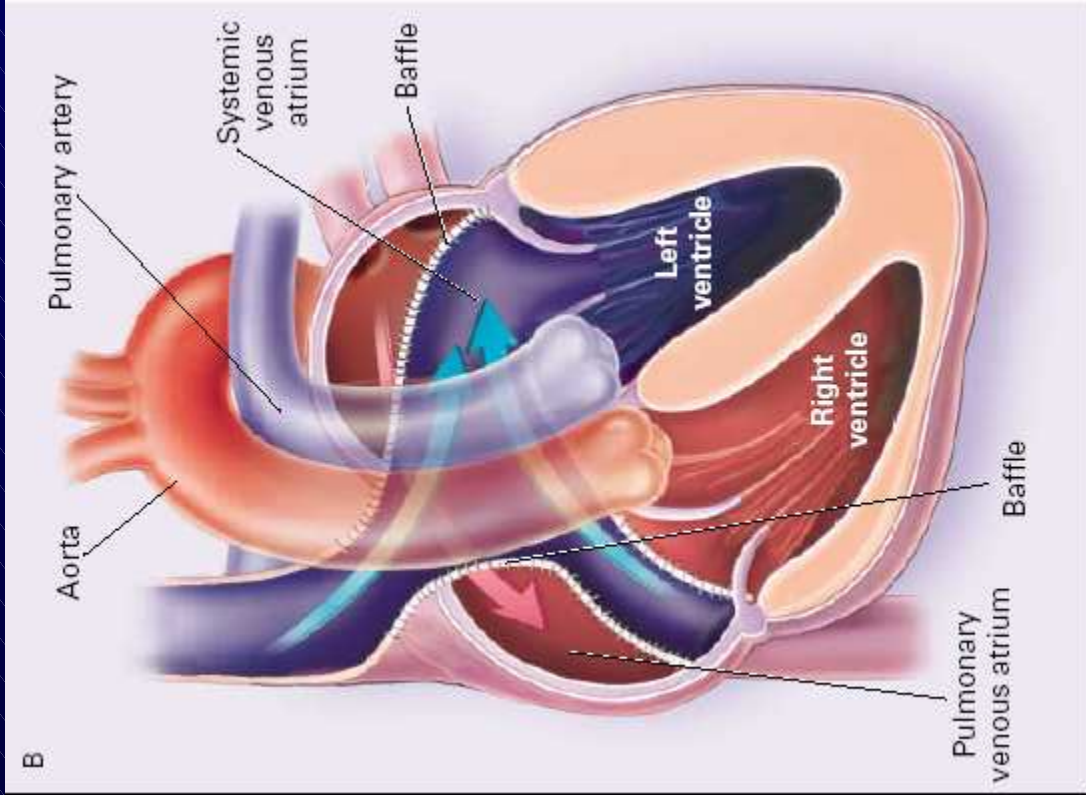
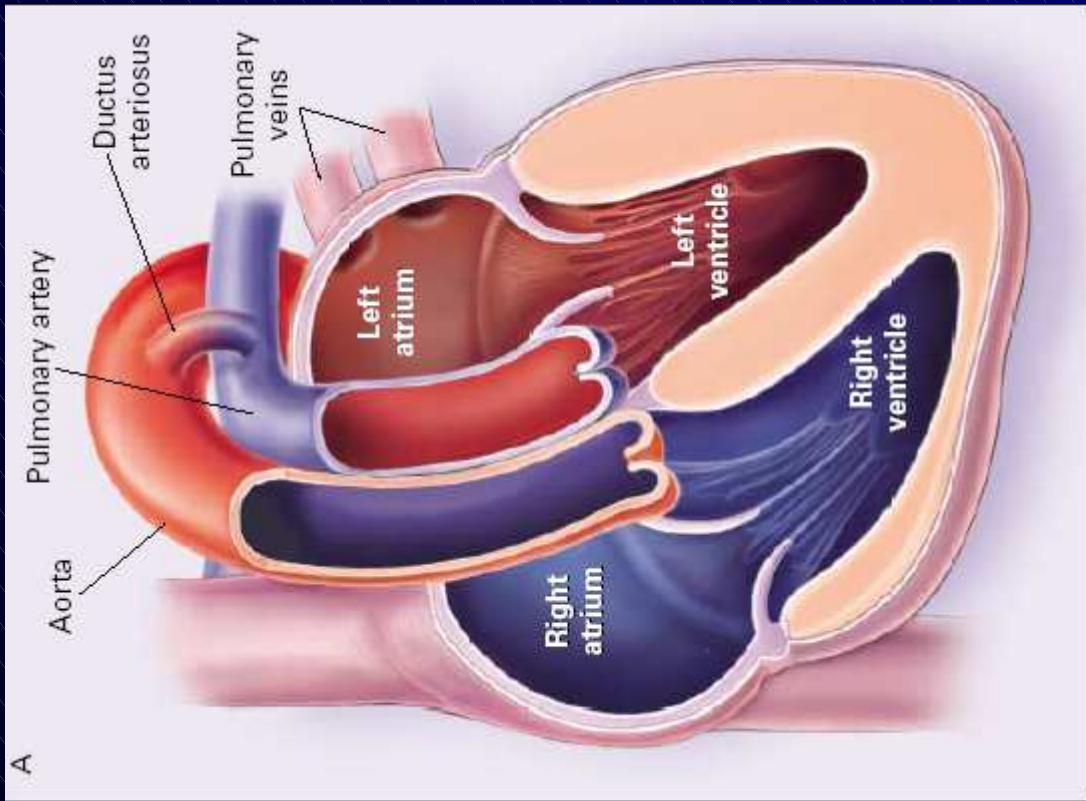


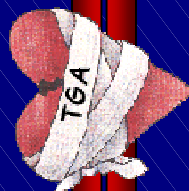
- Born 1914 in Clinton (Ontario).
- Practiced in many surgical fields.
- 1944 innovations battlefield surgery.
- After war returned to HSC.
- 1949 world's first open-heart surgery on a dog.
- 1952 developed the Mustard operation in orthopaedics (polio).

## **1963: Mustard atrial switch repair for TGA.**

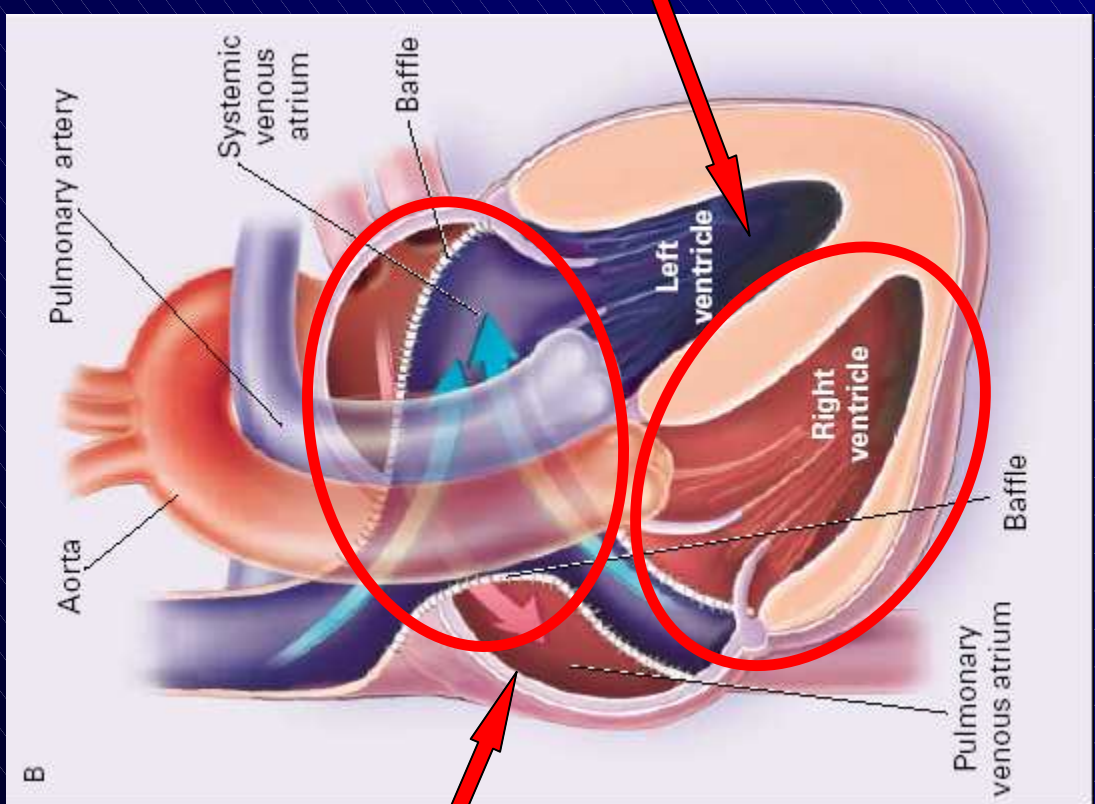


**Dr. William T. Mustard (1914-1987)**





# SYSTEMIC RIGHT VENTRICLE

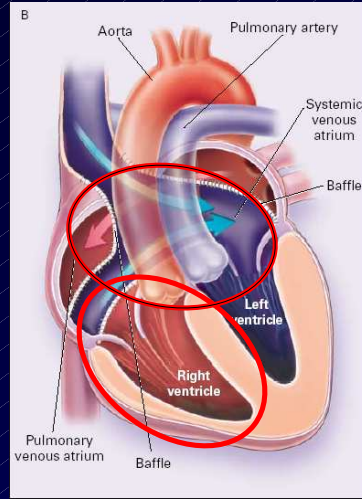


# NEW ATRIA



**NEW  
ATRIA**

**SYSTEMIC  
RIGHT  
VENTRICLE**



**ARRHYTHMIA  
(brady or tachy)**

**BAFFLE  
STENOSIS/  
LEAK**

**TRICUSPID VALVE**

**HEART  
FAILURE**

**ECHO, MRI**

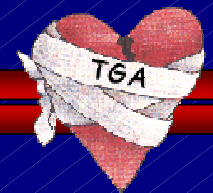
**ECG, HOLTER**

**SYMPTOMS**



# SYMPTOMS

- **Black outs.**
- **Lightheadedness.**
- **Palpitations.**
- **Shortness of breath.**
- **Leg swelling.**



# TREATMENT

## ARRHYTHMIA:

**BRADYCARDIA:** Pacemaker.

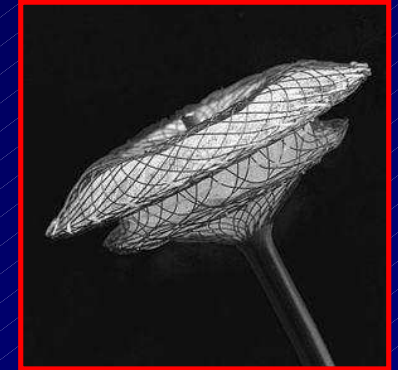
## **TACHYCARDIA:**

- **DRUGS** (amiodarone, sotalol, metoprolol, anticoagulation ...).
- **Pacemaker.**
- **Ablation.**
- **ICD.**



# TREATMENT

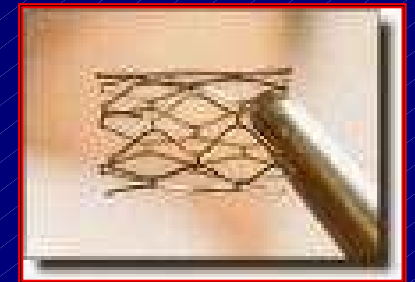
BAFFLE LEAK  
DEVICE CLOSURE.



**SURGERY**

BAFFLE STENOSIS

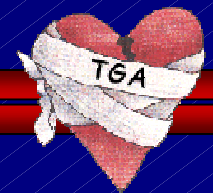
BALLOON DILATATION/STENTING.



# TREATMENT

## HEART FAILURE/ TRICUSPID VALVE:

- **DRUGS** (diuretics, digoxin, systemic vasodilators, beta-blockers...).
- **SURGERY:**
  - \* Tricuspid replacement.
  - \* Double switch.
  - \* Cardiac transplantation.



# Why me?

- CHD occurs in 0.8% of newborn infants.
- TGA occurs in 0.2‰ of newborn infants.

## Yes, but ...why me?

- Ongoing genetic studies.
- Great majority sporadic.
- CHD detected in 2.7% of first degree relatives <sup>1</sup>.
- No affected offspring in large study<sup>2</sup>.

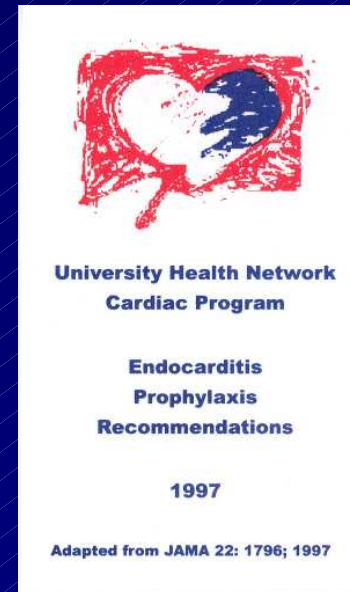


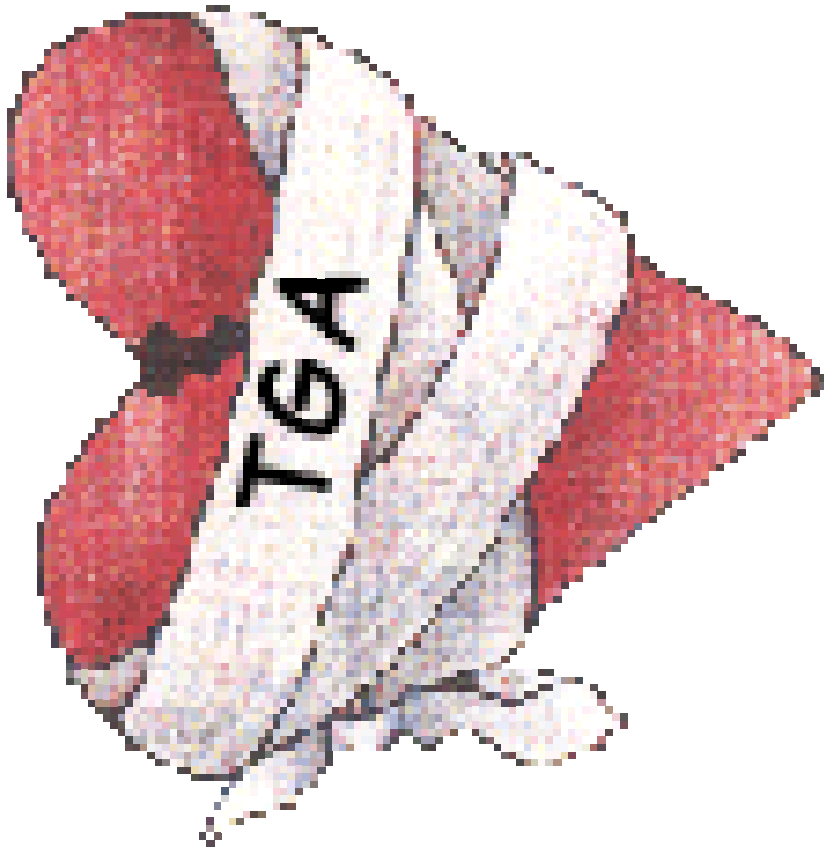
1. Loffredo CA, et al. *Am J Med Genet A*. 2004 Jan 30;124(3):225-30.
2. Burn J, et al. *Lancet*. 1998;351:311-316.



# General Recommendations

- **Regular follow-up at specialized centre.**
- **Prevention:**
  - **Annual flu shot.**
  - **Pneumovax.**
  - **Endocarditis Prophylaxis.**
- **Change in medical treatment.**
- **Change in symptoms.**





**THANK YOU VERY MUCH!**

