

# Lupus and Your Heart



Anthony Ocon, MD, PhD

URMC Rheumatology

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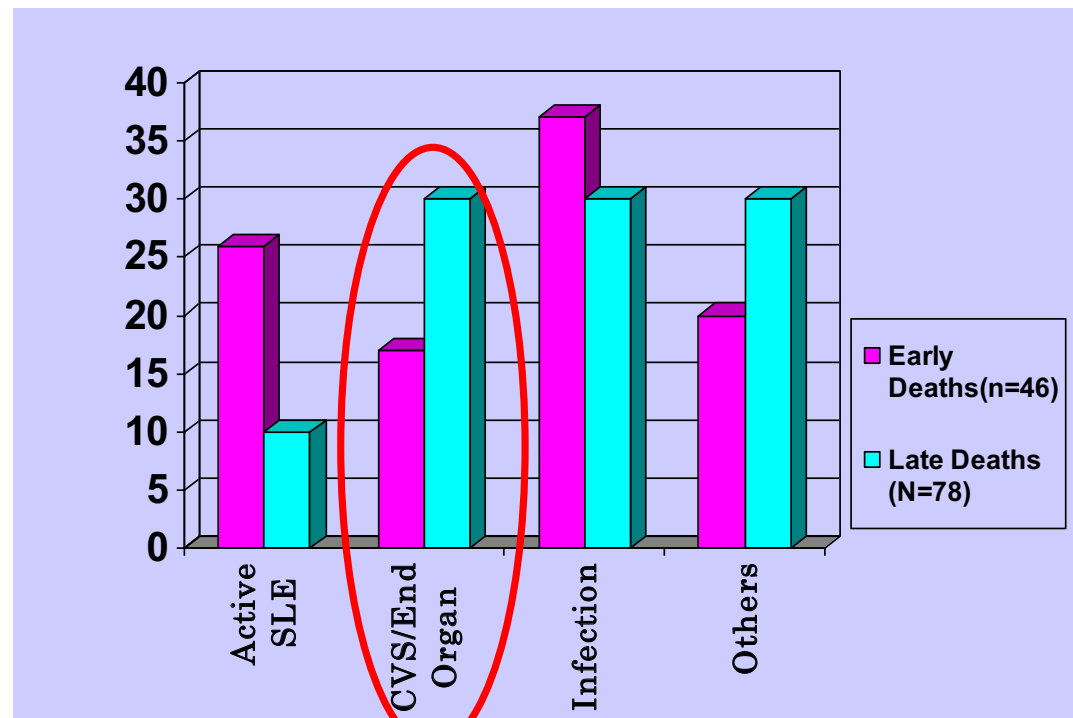
Doc, why are you  
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# Doc, why are you telling me this?

Lupus patients **DIE** from cardiovascular disease!

Two patterns of mortality in Lupus:

- ❖ Early
  - ❖ First 5 years
  - ❖ Death due to lupus or complications
- ❖ Late
  - ❖ After 5 years
  - ❖ Cardiovascular disease is a leading cause!



Abu-Shakra et. al. "Mortality in SLE." J Rheum 1995; 22: 1259-1264

# So what's my risk doc?

❖ **6-10% of lupus patients have clinical active heart disease**

❖ **Women:**

❖ **5-6 fold increased risk than the general population**

❖ **Age 35-44 years: 50-fold increased risk!!**

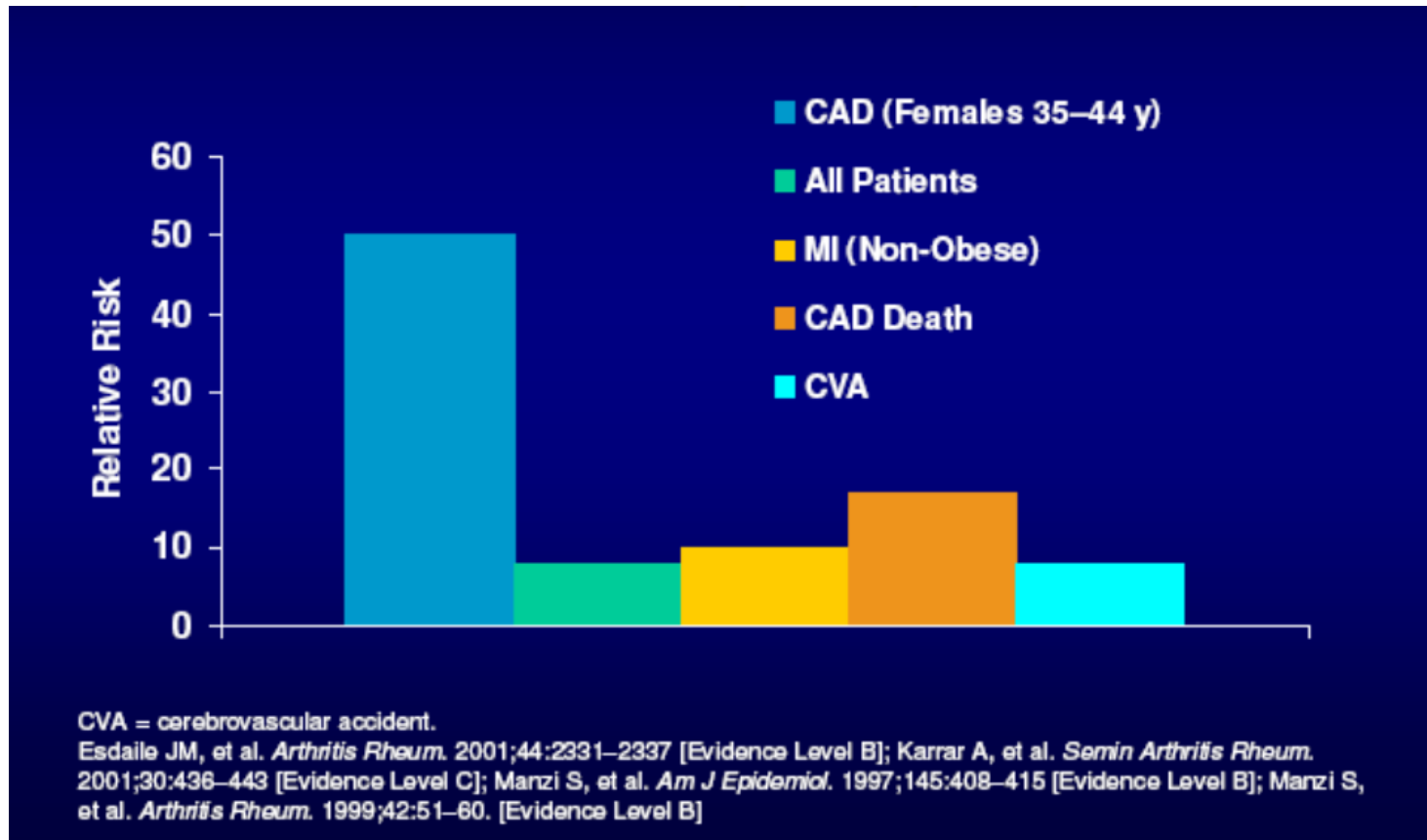
❖ **Only 17% aware of risk**

❖ **Men:**

❖ **3.6 times the odds of the women!**

# So what's my risk doc?

Risk of heart attack, stroke, and cardiovascular death is high!



# **Why do lupus patients have an increased risk of heart disease?**

# Lupus and the Cardiovascular System

**Direct effects** on the heart and blood vessels:

- ❖ Heart muscle (myocarditis)
- ❖ Lining of the heart (pericarditis)
- ❖ Heart valves (Libman-Sacks endocarditis)
- ❖ Heart beat (arrhythmia or heart block)
- ❖ Heart disease (coronary artery disease)
- ❖ Blood vessel inflammation (vasculitis)
- ❖ Artery plaque disease (atherosclerosis)
- ❖ Blood clots (antiphospholipid syndrome)



Image from: <https://www.istockphoto.com/photos/cardiovascular-system?mediatype=photography&phrase=cardiovascular%20system&sort=mostpopular>

# High Prevalence of Traditional Cardiac Risk Factors in Lupus

## RISK FACTOR:

High blood pressure	41%
Family history heart disease	41%
Smoking	35%
Increased cholesterol	56%
Diabetes	7%
Sedentary lifestyle	70%
Obesity	28-50%



Modified from:  
<https://stock.adobe.com/nz/search/images?k=surprised%20black%20woman>

Medicine (Baltimore). 1992 Sep;71(5):291-302. Arthritis Care Res (Hoboken). 2011 Feb;63(2):261-8



# Other Risk Factors for Cardiovascular Disease

## Lupus Inflammation

- ❖ Age
- ❖ Disease duration
- ❖ High disease activity
- ❖ Chronic kidney involvement
- ❖ Inflammation on lab tests

## Treatment

- ❖ Glucocorticoids  
(steroids, prednisone)
  - ❖ Dose dependent
  - ❖ Increase cholesterol
  - ❖ Increase blood pressure
  - ❖ Increase weight

# Doc, how do I know if I could have Cardiovascular Disease?

## Symptoms

- ❖ May be asymptomatic!
- ❖ Headache
- ❖ Short of breath at rest or with exercise
- ❖ Chest pain
- ❖ Leg swelling

## Signs

- ❖ Elevated Blood Pressure
- ❖ Blood tests
- ❖ High weight/BMI
- ❖ Currently Smoking
- ❖ Diet of high sugar and fatty foods

# Screening for Cardiovascular Disease

- ❖ See your primary care physician
  - ❖ Check your weight
  - ❖ Check your blood pressure
  - ❖ Check blood tests for cholesterol, diabetes, kidney disease
- Advanced Testing:
- ❖ EKG
  - ❖ Echocardiogram
  - ❖ Stress test
  - ❖ Coronary Calcium Score

Doc, what can I do to  
decrease my risk?

# General Principles to improve Health

- ❖ Quit smoking
- ❖ Weight control
- ❖ Exercise more
- ❖ Minimize salt intake



Image from: <https://myheart.net/articles/how-often-should-i-have-a-stress-test/>

# Eating Healthy in Lupus

## Heart Healthy Foods:

- ❖ Fresh vegetables (tomatoes, cabbage, carrots, lettuce, spinach, kale)
- ❖ Fresh Fruits (apples, oranges, bananas, pears, peaches)
- ❖ Fat-free or 1% Fat Dairy (milk, cheese, yogurt)
- ❖ Whole Grains (whole wheat, brown rice, quinoa, oats, couscous)
- ❖ Lean Protein (seafood, poultry, beans, nuts, seeds, tofu)
- ❖ Vegetable Oil (olive, peanut, safflower, soybean, sunflower)

## Avoid less healthy foods:

- ❖ Sugars, pastries, candy, processed foods, processed meats
- ❖ Saturated fat, trans fats, red meat

# A Heart Healthy Diet: Mediterranean

## Mediterranean Diet:

- ❖ Vegetables, fruits, herbs, nuts, beans, whole grains, dairy, poultry, eggs, seafood, olive oil
- ❖ Lupus patients who adhere do better:
  - ❖ Fewer cardiovascular risk factors
  - ❖ Lower disease activity
  - ❖ Less damage from lupus

## Mediterranean Diet



Modified from: <https://www.medicalnewstoday.com/articles/149090>

# Other Interventions

- ❖ Yearly primary care preventative visits
- ❖ Aspirin
- ❖ Guideline directed therapy for medical diseases
- ❖ Vaccinations



# Other Interventions

## Blood Pressure Control

- ❖ BP goal <130/80
  - ❖ If heart disease, <120/80
- ❖ Multiple medications:
  - ❖ Choose based on comorbidities
  - ❖ Calcium channel blockers
  - ❖ ACE inhibitors
  - ❖ Angiotensin receptor blockers
  - ❖ Diuretics

## Cholesterol Control

- ❖ Low density lipoprotein
  - ❖ "Bad" Cholesterol
  - ❖ Goal <100
- ❖ Treatments
  - ❖ Low fat diet, exercise
  - ❖ Statin medications
  - ❖ Ezetimibe & Fibrate medication
  - ❖ PCSK9 inhibitors

# How does the Rheumatologist help?

- ❖ Assess, treat, and manage lupus disease activity
- ❖ Screen for other medical diseases
- ❖ Refer to additional specialists when necessary
- ❖ Educate lupus patients and primary care physicians

**Thank you!**

Any questions?

