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Women's health depends on a lifetime
of answers—one test at a time.

Women and Autoimmune Disease

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Answers for life.

Women and Autoimmune Disease

Autoimmune diseases affect approximately 8% of the population, 78% of whom are women.¹ After cancer and heart disease, autoimmune diseases are the most commonly occurring diseases in the U.S., affecting 50 million Americans. Women comprise nearly 8 of every 10 people with autoimmune disease.² Rheumatoid arthritis, a common autoimmune disorder, is two to three times more prevalent in women than men.³



What Are Autoimmune Diseases?

Autoimmune diseases are conditions that occur when the immune system mistakenly attacks and destroys healthy body tissue. Normally, the immune system's white blood cells help protect the body from harmful substances, called antigens. Examples of antigens include bacteria, viruses, toxins, cancer cells, and blood or tissues from another person or species. The immune system

produces antibodies that destroy these harmful substances.⁴

In patients with autoimmune disease, the immune system can't tell the difference between healthy body tissue and antigens. The result is an immune response that destroys normal body tissues. This response is a hypersensitivity reaction similar to the response in allergic conditions.⁴



Global Burden of Autoimmune Disease

The National Institutes of Health (NIH) estimate that up to 23.5 million Americans suffer from autoimmune disease, and the prevalence is rising.⁵

Rheumatoid Arthritis

Rheumatoid arthritis, or RA, is a form of inflammatory arthritis and a common autoimmune disorder. In RA, for reasons no one fully understands, the immune system—which is designed to protect our health by attacking foreign cells such as viruses and bacteria—instead attacks the body's own tissues, specifically the synovium, a thin membrane that lines the joints. As a result of the attack, fluid builds up in the joints, causing joint pain and inflammation that is systemic, meaning it can occur throughout the body.⁶

Rheumatoid arthritis is a chronic disease, meaning it can't be cured. Most people with RA experience intermittent bouts of intense disease activity, called flares. In some people, the disease is continuously active and gets worse over time. Others enjoy long periods of remission: no disease activity or symptoms at all. Evidence shows that early diagnosis and aggressive treatment to put the disease into remission are the best ways to avoid joint destruction, organ damage, and disability.⁶

Rheumatoid Arthritis Statistics

The prevalence of RA varies from 0.5–1% of the global population; it is more common in women and in developed countries.³

- Within 10 years of onset, at least 50% of patients in developed countries are unable to work full time.
- An estimated 1.5 million people in the U.S. have RA.
- Lifetime risk is 4% for women and 3% for men.

Risk Factors³

- **Sociodemographics:** The incidence of RA is typically two to three times higher in women than men. The onset of RA, in both women and men, is highest among those in their sixties.
- **Genetics:** There is longstanding evidence that specific HLA class II genotypes are associated with increased risk.
- **Modifiable risk factors:** Several modifiable risk factors have been studied in association with RA, including reproductive hormonal exposure, tobacco use, dietary factors, and microbial exposure.
- **Reproductive and breastfeeding history:** Hormones related to reproduction have been studied extensively as potential risk factors for RA, including oral contraceptives and those used in hormone-replacement therapy. Other reproductive factors include live-birth, breastfeeding, and menstrual history.

Symptoms

Signs and symptoms of rheumatoid arthritis may include:

- Tender, warm, swollen joints
- Morning stiffness that may last for hours
- Firm bumps of tissue under the skin of the arms (rheumatoid nodules)
- Fatigue, fever, and weight loss

Diagnosis

Early diagnosis of RA is critical. Starting treatment as soon as possible, even before symptoms appear, may delay and even prevent joint degradation and disability.

Siemens solutions for Autoimmune Disease testing

	ADVIA® Chemistry Systems	Dimension® RxL Max®/ Xpand® Plus Systems	Dimension® EXL™ Systems	Dimension Vista® Systems	IMMULITE® Systems	Siemens Imaging Systems	Other Siemens Systems
Anti-CCP					•		
Rheumatoid factor	•			•			•
CRP	•	•	•	•	•		
Liver enzymes	•	•	•	•			
CBC							•
Radiography						•	
Magnetic resonance imaging						•	
Ultrasound						•	

References

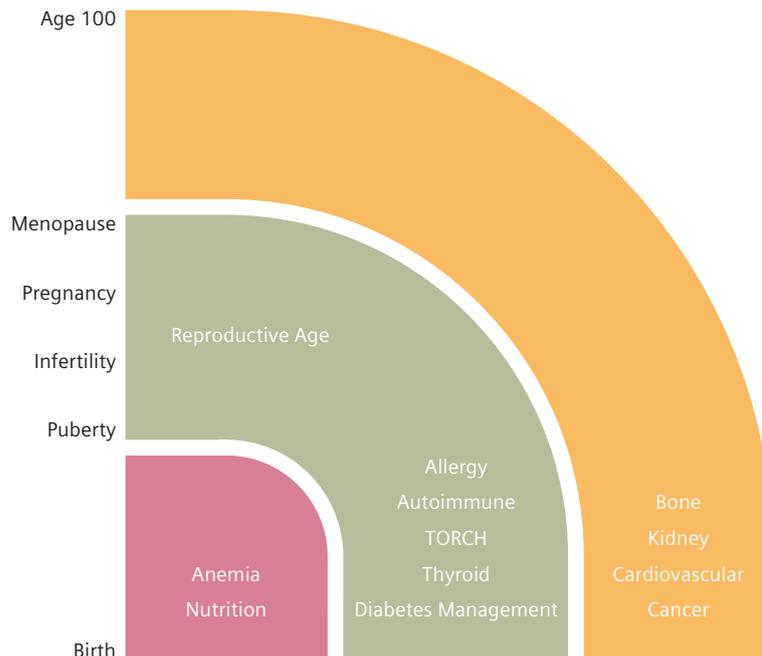
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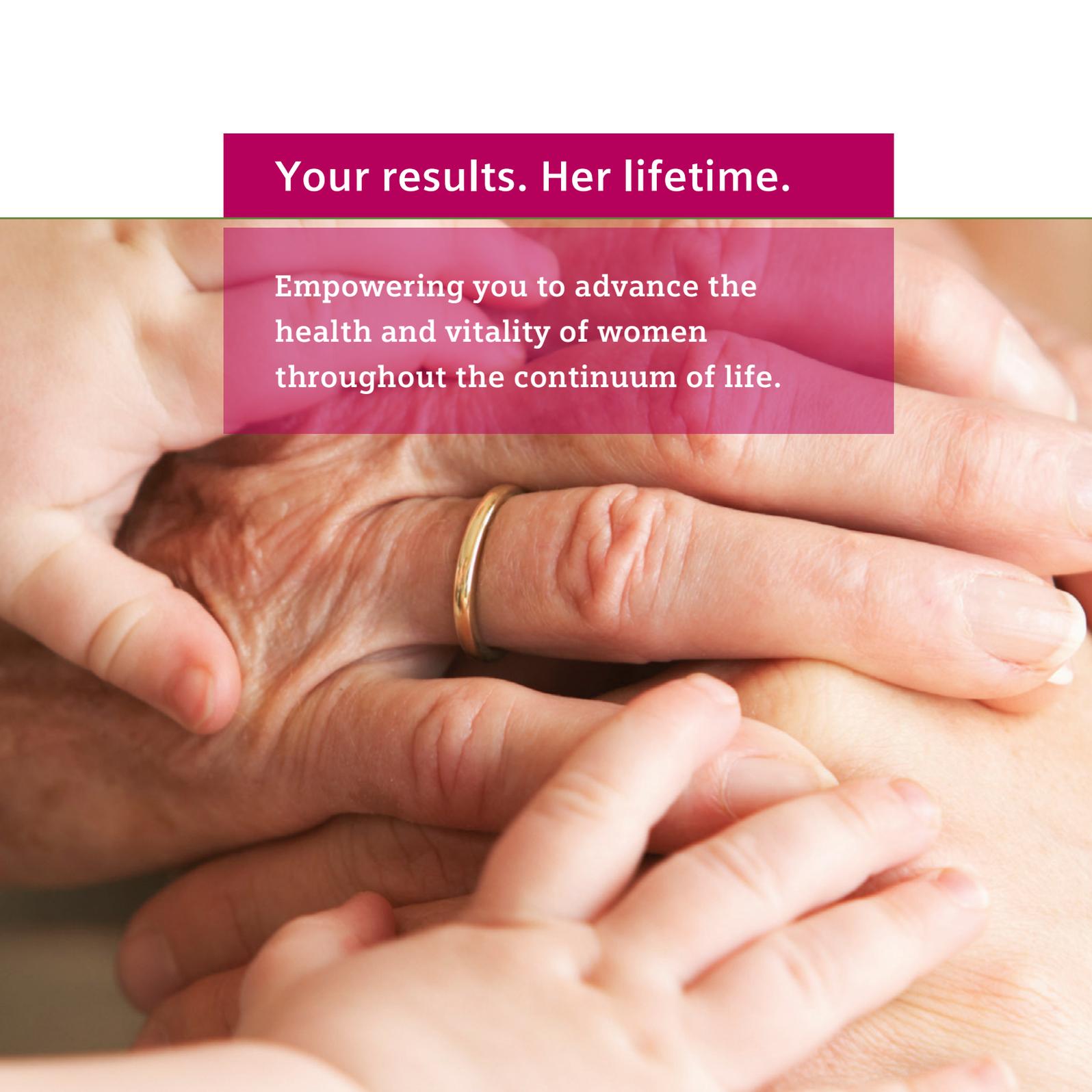
Caring for Women with Autoimmune Disease

Reducing the burden of autoimmune disease in women includes understanding risk factors, making rapid, accurate diagnoses when symptoms occur, implementing appropriate therapies, and monitoring treatment. Laboratory diagnostic testing plays an integral role in caring for women throughout the continuum of autoimmune disease treatment.

As an integrated diagnostics company, Siemens' comprehensive solutions include risk assessment and early prevention, diagnosis, therapy, and aftercare. In addition, our solutions in healthcare information technology support the exchange of data for making informed decisions.

Women's Lifetime Health Continuum





Your results. Her lifetime.

**Empowering you to advance the
health and vitality of women
throughout the continuum of life.**

Siemens Healthcare Diagnostics, a global leader in clinical diagnostics, provides healthcare professionals in hospital, reference, and physician office laboratories and point-of-care settings with the vital information required to accurately diagnose, treat, and monitor patients. Our innovative portfolio of performance-driven solutions and personalized customer care combine to streamline workflow, enhance operational efficiency, and support improved patient outcomes.

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