

Amyloidosis is a multisystem disease of multiple etiologies and types. Patients with amyloid in the modern era now have access to new therapies that can change the course of the disease and have improved the prognosis for many.

AMYLOIDOSIS TYPES

We offer diagnosis and treatment for all types of amyloidosis. The most common types include:

- AL AMYLOIDOSIS: AL is the most common type in the U.S. and
 is associated with a monoclonal protein deposition in various
 organs, including the heart, kidneys, gastrointestinal tract,
 liver and nerves. The cardiologists in our Cardiac Amyloid Clinic
 work closely with specialists in hematology/oncology and bone
 marrow transplant to personalize your patient's treatment during
 chemotherapy and/or stem cell transplant. New chemotherapy
 regimens have changed the prognosis for many with AL amyloid.
- ATTR AMYLOIDOSIS: This type is caused by a genetic mutation
 in various genes, most commonly transthyretin (TTR), leading to
 protein accumulation in various areas of the body. The proteins
 and the inflammation triggered by the proteins can lead to cardiac
 dysfunction. One type of ATTR mutation can be seen in approximately
 four percent of African Americans. Disease presentation is highly
 variable in terms of age and organ involvement. Likewise, prognosis is
 variable. New therapies are available and genetic testing is important
 for patients and their relatives.
- WILD-TYPE (SENILE) ATTR AMYLOIDOSIS: This type is caused by normal proteins secreted from the liver that accumulate and get trapped in target organs. The heart is one of the most commonly affected organs. There are now therapies available for wild-type amyloid that can delay disease progression.



THE HENRY FORD DIFFERENCE

Our Cardiac Amyloid Clinic offers special expertise in diagnosing and treating this rare disease, which is characterized by a buildup of abnormal proteins in organs and tissues. An accurate, early diagnosis is key to ensure the best treatment outcome.

To refer a patient to our Cardiac Amyloid Clinic, please call:

(313) 916-2966 - Detroit (248) 661-7022 - West Bloomfield

COMPREHENSIVE DIAGNOSIS

The Cardiac Amyloid Clinic is part of our Multidisciplinary Amyloid Program. A Henry Ford cardiologist will work with you to help evaluate your patients in a timely manner and will develop a personalized treatment plan best suited for the amyloid type and disease stage. Our amyloid cardiology experts will work with amyloid specialists in hematology/oncology, bone marrow transplant, nephrology, neurology, hepatology and pulmonology as clinically indicated. Our amyloid evaluation includes:

- LABORATORY TESTING: Working with hematology/oncology, we will send appropriate blood and urine testing to help in the diagnosis and characterization of amyloid and to stage the amyloid disease.
- BONE MARROW BIOPSY: Performed to rule out concomitant myeloma and to prepare for bone marrow transplant in those with AL amyloid.
- SPECIALIZED CARDIAC IMAGING: Including cardiac MRI, PYP scanning and echocardiography with strain imaging.
- TISSUE BIOPSY: When testing is indeterminant or amyloid staging
 is needed for transplant, we offer organ biopsy, including fat pad,
 endomyocardial biopsy, renal biopsy, trans/endobronchial biopsy,
 liver biopsy and gastrointestinal biopsy. We also offer the ability to
 characterize the amyloid protein using mass-spectroscopy.
- GENETIC TESTING: We offer salivary and blood-based genetic testing for diagnosis of familial (ATTR) amyloid.

ADVANCED TREATMENT

After diagnosis and characterization of amyloid, we stage the disease to determine the organs involved. We personalize treatment for each patient, depending on amyloid type, extent of organ involvement, and your patient's treatment preference and ability to withstand therapies.

- MEDICAL THERAPY: New drugs have recently received approval for treatment of hereditary and senile ATTR cardiac amyloidosis, and for amyloid polyneuropathy. These new drugs have changed the course of the disease for many patients. They include oral and infusion therapies. In addition, we are testing new therapies in clinical trials at Henry Ford.
- CHEMOTHERAPY: New chemotherapies have demonstrated marked improvement in outcomes for patients with AL amyloid, but timely referral is critical. A member of the Oncology Amyloid or Cardiac Amyloid team should see suspected AL amyloid patients urgently.
- ORGAN OR BONE MARROW TRANSPLANT: We may recommend this for selected patients who have advanced stage amyloid of the heart, liver or kidney. In addition, we may consider carefully selected patients with AL amyloid for bone marrow transplant.
- GENETIC TESTING & FAMILY GENETIC COUNSELING: Patients will
 receive thorough genetic counseling before and after genetic
 testing. We offer genetic counseling and testing for appropriate
 family members and will devise a monitoring plan for family
 members at risk for developing genetic amyloid.

HOW AMYLOID AFFECTS THE HEART

Cardiac amyloid can lead to the development of heart failure and conduction disturbances. Diagnosis is often delayed because cardiac amyloid often mimics hypertensive cardiomyopathy, hypertrophic cardiomyopathy or idiopathic diastolic heart failure. However, rapid diagnosis and treatment is required to ensure your patient has the best chance for survival.

OUR EXPERT TEAM

With a depth of experience unmatched in the area, Henry Ford offers a team of cardiac amyloid specialists who provide comprehensive care, led by three experts:



JENNIFER COWGER, M.D., MS, FACC JCOWGERI@HFHS.ORG



KARTHIKEYAN ANANTHASUBRAMANIAM, M.D., FACC KANANTHI@HFHS.ORG



CELESTE WILLIAMS, M.D., FACC CWILLIA6@HFHS.ORG

OUR GOOD PARTNER PROMISE

The Henry Ford Medical Group is committed to providing unsurpassed quality to your patient as well as easy access and communication to you, the referring physician.

It is our privilege to partner with you in the care of your patient and our promise is to promptly communicate with you after treatment has been successfully completed. We streamline the referring process in many ways, including:

- 24/7 availability
- Critical care transport
- Concierge services for traveling patients
- · Nurse outreach coordinators
- · Preferred and timely access to our facilities and specialists
- Shared access to your patient's medical records

To refer a patient to our Cardiac Amyloid Clinic, please call:

(313) 916-2966 - Detroit (248) 661-7022 - West Bloomfield