Ancillary Testing

RETINA SPECIALTY INSTITUTE

PRESERVING | TREATING | ADVANCING

Retina Specialty Institute is the premier retinal practice in the Southeast. Our physicians fight for the amazing gift of sight every day through clinical research and practical treatment. The Institute offers state-of-the-art clinical and surgical procedures for patients suffering from eye diseases such as:

- Macular Degeneration
- Diabetic Retinopathy
- Retinal Tears, Holes and Detachments
- Epiretinal Membrane (Macular Pucker)
- Arterial and Venous Occlusions
- Complications of Cataract Surgery
- Uveitis (Inflammation in the Eye)
- Ocular Tumors
- Inherited Retinal Diseases
- Severe Eye Trauma
- Optic Nerve Disorders

Our surgeons, located throughout the Gulf Coast and Southern Alabama, are a group of world-class retina specialists who have earned an international reputation as leading retina researchers, disciplined clinical experts and caring, compassionate healers. Experience visionary retina care.

RETINA SPECIALTY™ INSTITUTE

What You're About to Read

1. *Digital Ocular Photography*
2. *Fluorescein Angiography*
3. *Visual Field Testing*
4. *Optical Coherence Tomography*
5. *Ophthalmic Ultrasound*

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Digital Ocular Photography

Photographs can be taken of the anterior structures of the eye and of the posterior structures including the retina or the optic nerve.

By photographing ocular tissues with specialized digital cameras, we can document the condition of anatomical structures at a point to compare them to changes which may occur in the future.

Our technicians are nationally-certified to provide the highest quality images.

To photograph the retina, it is best to dilate the eye with topical eye drops. Without touching the eye, a lens is focused on the retina and pictures are taken. Your retina specialist will then interpret the pictures and review them with you.

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Fluorescein Angiography (FA)

To evaluate the blood flow into the eye, special photographs are taken to highlight the blood vessels. This process is called fluorescein angiography and is performed by injecting a small amount of a vegetable-based dye (sodium fluorescein) into a vein in the arm and photographing the retina as the dye passes through it. Special filters in the camera lens highlight the dye to define any abnormalities within the retina or beneath it.

In a healthy eye, the dye reaches the ocular blood vessels only seconds after being injected into a vein in the arm, and the entire study generally takes less than 10 minutes to complete. The dye is eliminated from the body within about 24 hours.

Our technicians are nationally-certified to obtain the highest quality fluorescein angiogram images. Your retina specialist will interpret these images and review them with you as treatment decisions are made.

Visual Field Testing

The visual field refers to the total area seen by the eye. We refer to this area in terms of central (straight ahead) and peripheral (to the side) vision.

Many disorders, particularly those involving the optic nerve—including glaucoma, strokes or brain tumors—can damage our vision by causing specific visual field changes.

Although visual field screenings can be done simply by having a patient identify objects held in the periphery, formal plotting of the visual field is necessary to diagnose subtle defects.

An automated perimeter is a computer used to plot the field of vision consistently. This allows for precise data and documentation to compare with future tests.

To obtain an automated visual field, you focus on a single target in a white dome. A small light is shown in various positions inside the dome —by pressing a button—you confirm that you see the light. The data is collected and organized by the computer and interpreted by your ophthalmologist.

Optical Coherence Tomography

Optical coherence tomography is another way to create an image of an ocular tissue (most commonly the retina) to assist in diagnosing and managing ocular disorders.

This noninvasive test uses infrared light waves which reflect differently off unique cell types. These reflections are used to construct a high quality digital image of that tissue with very high resolution.

The images created of the retina allow your physician to evaluate the individual layers in microscopic detail to make a more specific diagnosis as well as to follow the effectiveness of treatment over time.

We use these scans to diagnose and guide our management of disorders associated with swelling within the retina or distortions of the retinal surface. We also use them to evaluate the optic nerve in conditions like glaucoma.

The OCT images take only a few moments to obtain and are best taken after the pupil is dilated with drops. Our technicians are nationally-certified to obtain the highest quality images. The images are then interpreted by your retina specialist and reviewed with you.

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Ophthalmic Ultrasound

The posterior structures are not always visible due to opacities in front of them. Opacities in the lens (cataracts) or in the fluid within the eye can limit the view to the retina or the optic nerve.

Ultrasonography is used to see through these opacities. It is also used to measure thickness and to differentiate tissue types.

It is important in the diagnosis of tumors which can invade the eye. Ocular ultrasound is a noninvasive test with no side effects.

It relies on sound waves bounced off of structures to identify their characteristics. A small probe is placed on the outside of the eye and is felt as a gentle vibration.

A computer-generated image is then created. It is interpreted by your retina specialist and reviewed with you.

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