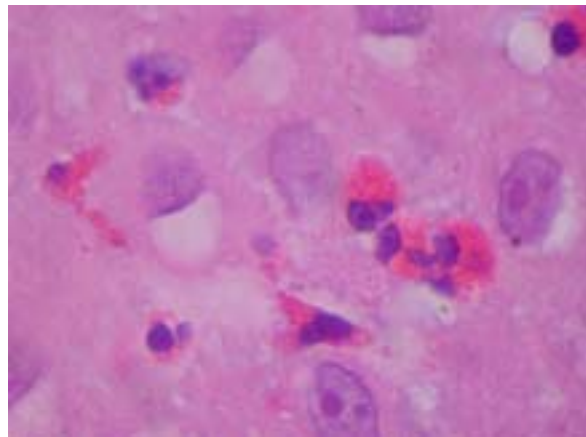


## Eosinophilic Esophagitis

By Brent M. Hjermstad, M.D.

The enigmatic eosinophil is at work again. It's loose in the esophagus and causing trouble. Naturally, one would think that eosinophils in the esophagus should have a specific appellation. The naming of a condition, however, may be either descriptive, like eosinophilic esophagitis, or eponymic, like Crohn's disease. First described in 1978, the diagnosis of eosinophilic esophagitis (EE) languished for about two decades (perhaps because of its uninspiring descriptive diagnosis) before becoming the current hot topic in gastroenterology. The diagnosis has become more frequent during the past ten years due to increased recognition among gastroenterologists and—more recently—pathologists, who now know that there is more than one disease with eosinophils in the esophagus besides reflux esophagitis (also known as gastroesophageal reflux disease—GERD for short—a frequently used term, perhaps because it is catchy and easy to pronounce).



**Figure 1.**

*Eosinophilic esophagitis – should it have had an eponym?*

Eosinophilic esophagitis is another one of those diseases that we can now recognize but for which we don't know the pathogenesis (idiopathic does not mean idiot pathologists). It seems to be an allergic condition, but why it now seems so common—and just what the allergic stimulus could be—is still unknown.



**Figure 2.**

*This patient with EE has concentric rings with some linear stripes (endoscopic photo courtesy of Dr. Gavin Young)*

While initially described in children, the characteristic clinical presentation is a middle-aged man with solid-food dysphagia. Other associated allergic disorders occur commonly, including asthma (> 70%), family history of allergy (30-50%), peripheral eosinophilia (50%), and abnormal skin testing (70%). The offending agent is thought to be a food allergen, or perhaps an inhaled or swallowed airborne allergen. Esophageal strictures are common in EE, are often multiple, and result in a "ringed" appearance on barium swallow. Multiple concentric rings are present on endoscopy, and occasionally, there may be white patches. Diagnosis of the condition relies on endoscopy with mucosal biopsy. Biopsies from the proximal and mid esophagus, in addition to the distal esophagus, are useful in distinguishing eosinophilic esophagitis from GERD. Chemical pH monitoring of the esophagus shows a normal pH.

Medicine is an empiric science that prefers to classify diseases in a binary, yes-no, fashion. With nature being what it is, this is seldom completely successful, especially when numeric counts are involved. It has been observed, however, that patients with reflux esophagitis seldom have more than 10 eosinophils per microscopic high-power field (usually 3-5 or less), while patients with eosinophilic esophagitis usually have more than 20 (often more than 50) eosinophils per high-power field.

## Mt. Spokane High School Special Education Students Assemble InCyte's Manifest Bags

By Felix Martinez, Jr., MD.

InCyte Pathology has been using specimen manifest bags since October 2006 to assist in specimen tracking and to fulfill requirements set forth in the College of American Pathologists Laboratory Patient Safety Goals.

The word 'manifest' is utilized for the shipping bags because the contents of the bag are documented or "manifested" with each shipment.

Through the manifest process, specimens are tracked using a bar code system to document when the specimen has left an office and when it arrives at InCyte. This, in turn, means better patient care. The special large transportation bags also protect and keep the specimens together during transport to our facility.

InCyte Pathology contracts with Mt. Spokane High School's vocational training program for special needs students to prepare the manifest shipping bags that are used to send specimens to our laboratory. Since the assembly work dovetails nicely with the programs goals, it has been a successful part of attempts by Mt. Spokane High School to provide real world transitional vocational experiences for the students.

Mt. Spokane High School's vice-principal Jim Preston approached classroom instructor Jeff Williamson with the idea to have students work with InCyte in the manifest bag venture. Mr. Williamson is pleased to have the opportunity to work with a community business to help students develop vocational skills. As students assemble the manifest bags,

they are participating in meaningful work that simulates job experiences outside of the school.

"This is *real* vocational education," says Mr. Preston. "We are thankful for the opportunity to partner with InCyte to provide meaningful vocational activities for students at Mt. Spokane."

Examples of other community work performed by the program's students include laundry services for two physical therapy offices and straightening shelves at Yokes' Grocery near Mt. Spokane High School.

Over the spring months the students packaged over 45,000 manifest bags. The funds earned by the class are being used for new equipment, programs and events for the Mt. Spokane Special Education Department.

On May 8<sup>th</sup>, students had a field trip to InCyte Pathology to see where the manifest bags are put to use. Hosting the tour were InCyte's Terry Shields, Tena Vela, Candi Sibley, and Molly Preston.



## InCyte Sponsors Valley Girl Triathlon

For the second straight year, InCyte Pathology has been a gold level sponsor for the Valley Girl Triathlon held at Liberty Lake, Washington. This year the event was held on July 13th with over 500 women of all ages participating.

Dr. Amy Backer, a pathologist at InCyte Pathology, has both competed in and volunteered at the event. InCyte client representatives participated by passing out granola bars and lip balm at the completion of the race and cheered on many familiar faces from the physician offices InCyte serves.

InCyte is pleased to be part of this popular event that promotes health and fitness for women.



*Photo courtesy of athleticpix.com*



## Team InCyte

Employees, family and friends will be part of TEAM INCYTE at the upcoming Coeur 'd Alene affiliate Komen Race for the Cure on September 28, 2008.

InCyte Pathology is a proud sponsor of the Susan G. Komen Race for the Cure, the nation's largest series of 5K races that benefits breast cancer research and initiatives and raises awareness for the fight against breast cancer.

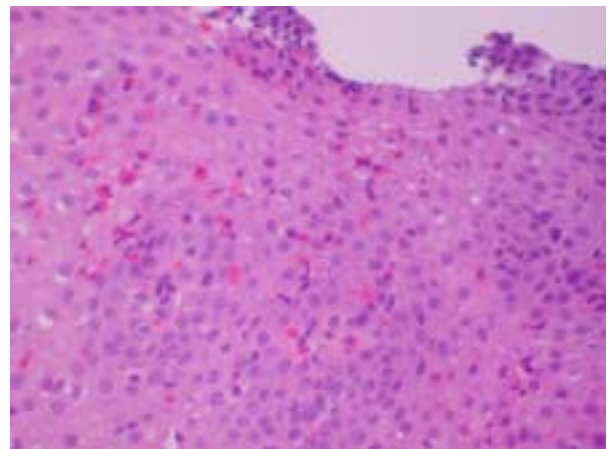
Please come visit us at our InCyte booth on the North Idaho College Campus on race day.

### ***Eosinophilic Esophagitis - continued from page 1***

Other helpful histologic features in EE are marked expansion of the basal proliferative zone, eosinophilic microabscesses (clusters of more than 4 eosinophils in the epithelium), and location in the mid or proximal esophagus.

So, if you have a patient who is getting solid food stuck after swallowing, think EE and consider endoscopy. Treatment includes removing the offending foods (if they can be determined—a very frustrating endeavor), inhaled steroid puffers that are swallowed instead of inhaled to administer topical steroid application, proton pump inhibitors (just in case the patient has a touch of reflux as well), H-2 blockers (same thinking), antihistamines, leukotriene modifiers (montelukast), and experimental treatment with anti-eosinophil monoclonal antibodies (mepolizumab).

Remember, EE is the work of the Enigmatic Eosinophil!



**Figure 3.**

*Too many eosinophils in the squamous epithelium in an esophageal biopsy of the patient in Figure 2.*

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# PathWAYS

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## Circulation List

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**PathWAYS** has items of interest for office personnel and assistants as well as for physicians, nurse practitioners, nurses and physician assistants. We recommend that, upon completion of circulation, your copy of **PathWAYS** be filed in the InCyte Pathology *Anatomic Pathology Services Manual* for future reference.

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