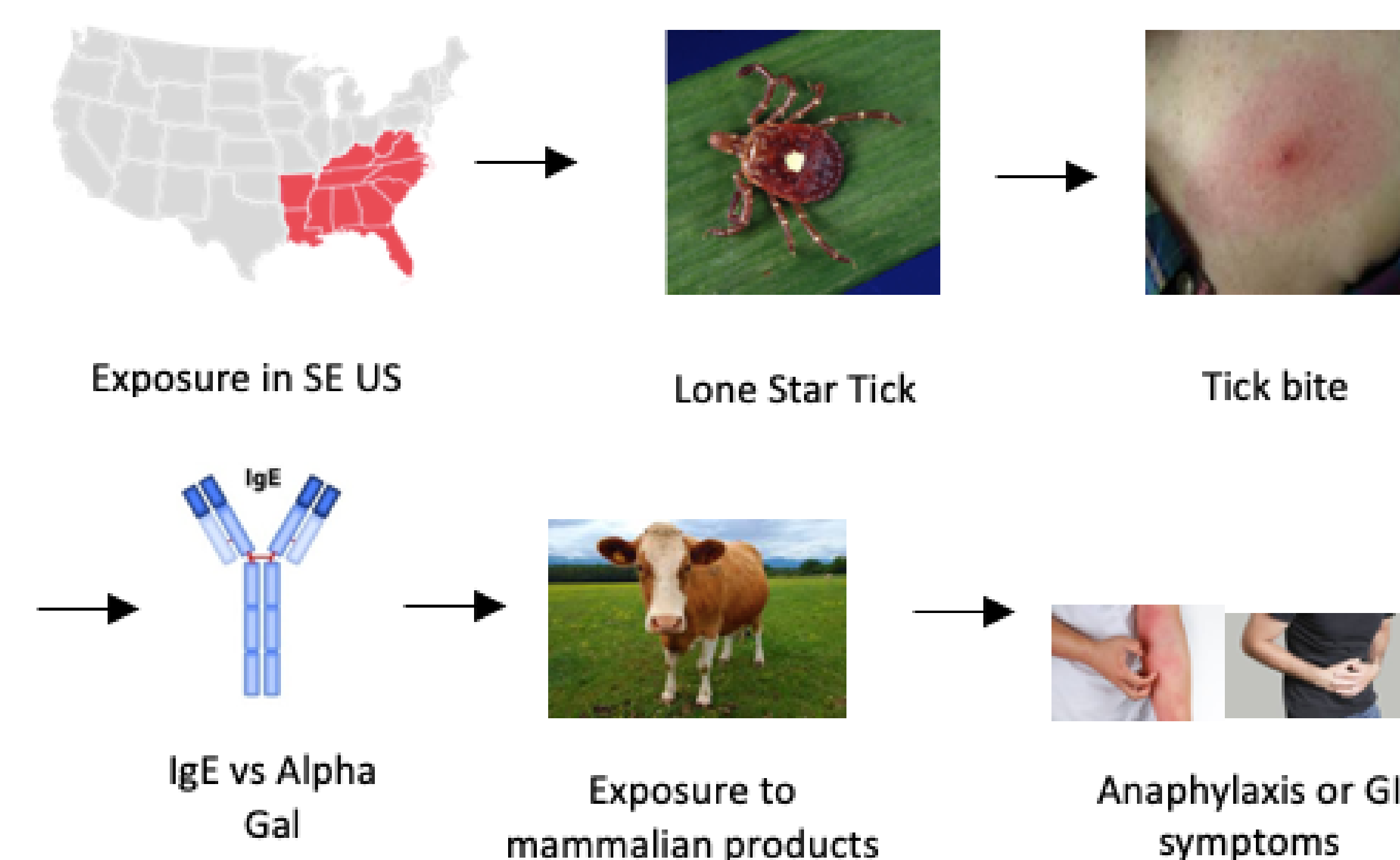


# Diverticulitis Vs. Acute Alpha Gal: Is it Seeds, Nuts or Cows that are Playing Havoc on Your Bowels

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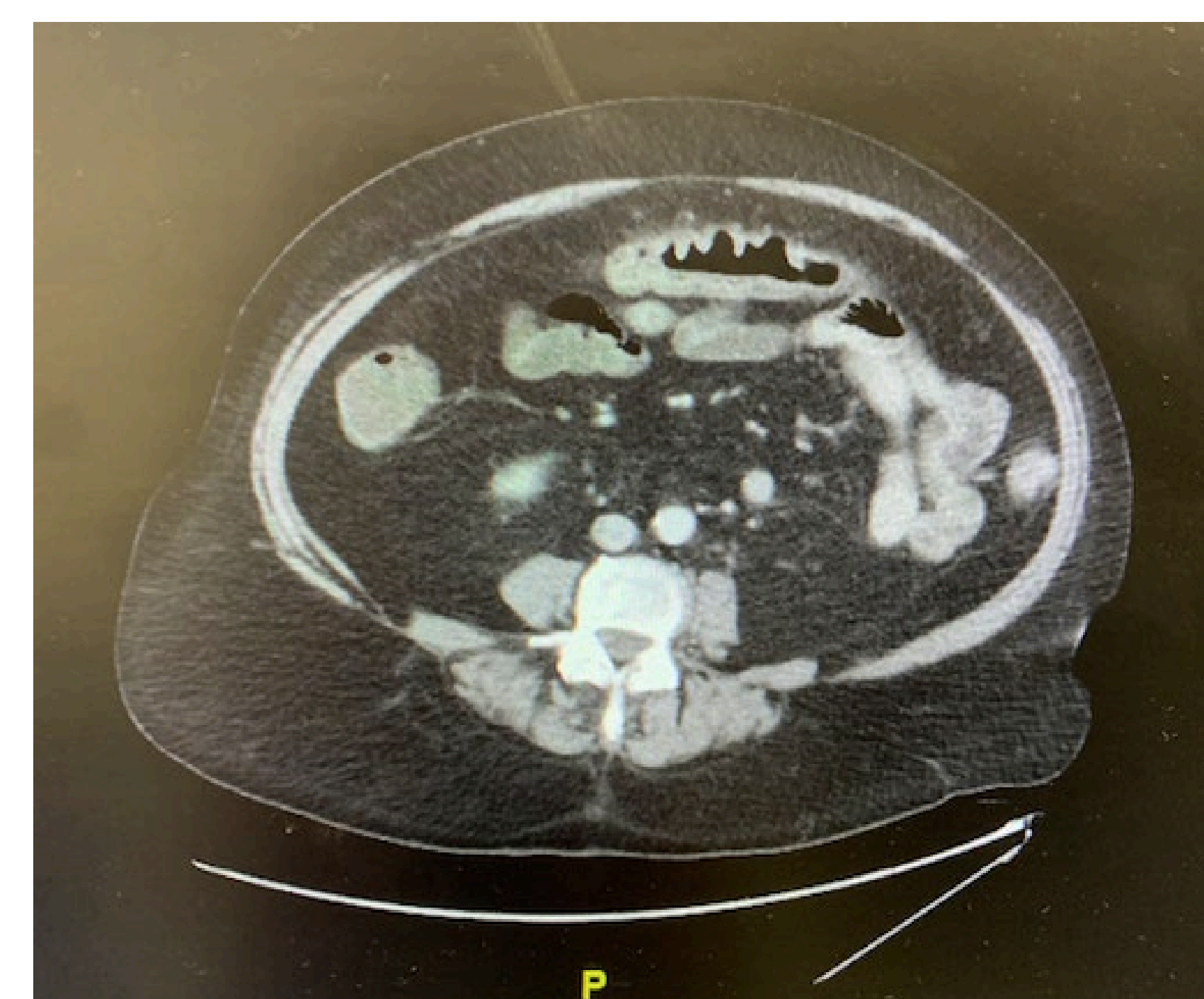
## Introduction

Alpha Gal syndrome is a recently discovered food allergy to red meat and other mammalian products. It was first described in 2009 as a delayed IgE anaphylaxis response to the carbohydrate, Galactose alpha-1,3-Galactose (Alpha Gal). In the United States, Alpha Gal Syndrome most commonly begins with a Lone Star tick bite that transfers the sugar molecule, alpha gal, into a human's body. The immune system responds by forming IgE antibodies to the alpha gal antigen. This causes mild to severe allergic reactions to red meat and other mammalian products. Because Alpha Gal Syndrome is associated with oral intake, it can be presumed that it would commonly present with gastrointestinal (GI) symptoms. Interestingly, there have not been many cases of Alpha Gal presenting with GI symptoms. This is a unique case of Alpha Gal Syndrome that is commonly misdiagnosed as other GI disorders. As the prevalence of Alpha Gal Syndrome is increasing there has been more variability in the presentation of the syndrome, such as GI symptoms.



## Case Description

A 61 year old female experienced crampy abdominal pain, vomiting, abdominal distention, profuse diarrhea, and fever (103.2°F) after eating a packaged salad, frozen turkey burger, and broccoli one day ago. She was previously diagnosed with Alpha Gal Syndrome and has abdominal cramping, nausea, and vomiting after eating red meats. She recently eliminated red meat from her diet and her abdominal symptoms had gone away until she presented to the hospital. On physical exam she had diffuse abdominal tenderness to palpation. The rest of the physical exam was negative for any significant findings. She was admitted to the hospital and the abdominal CT scan showed acute diverticulitis of the descending colon. Stool lactoferrin and Fecal Occult Blood Test were positive. WBC was 10.34 with a left shift of 30% bands. She was managed on Ceftriaxone, Metronidazole, and IV fluids. After two days of treatment she reported decreased abdominal pain, the diarrhea had ceased, and she was afebrile. She was discharged home and advised to continue to avoid triggers of her Alpha Gal Syndrome.



## Discussion

Alpha Gal Syndrome is an inflammatory IgE response to galactose-alpha-1,3-galactose, which is a common component of mammalian products and the saliva of the tick *Ixodes scapularis*. Galactose-alpha-1,3-galactose is carried in chylomicrons then absorbed in the small intestines. The patient presented in the case had an uncommon presentation of Alpha Gal Syndrome after consuming a packaged salad, turkey burger, and broccoli. Instead of presenting with anaphylaxis, she presented with an episode of diverticulitis. The patient's presentation of diverticulitis can be explained by a possible IgE response in the colon causing an episode of inflammation. In 3-20% of cases, patients report isolated gastrointestinal symptoms in the absence of anaphylaxis (Commins, 2020). However, further research is needed to explain the pathophysiology of an IgE reaction in the large intestine. The unawareness of this disease presenting as isolated gastrointestinal symptoms result in many patients being misdiagnosed with Irritable Bowel Syndrome or other GI conditions. In Southeastern United States up to 3% of the population is considered to have clinical Alpha Gal Syndrome (Commins, 2020). It's predicted that a vast majority of cases are undiagnosed or misdiagnosed as other illnesses (Flaherty, 2020). Having clinical suspicion for Alpha Gal Syndrome, especially in this area, can decrease the risk of misdiagnoses when a patient presents with gastrointestinal symptoms

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