Figure 1 – This picture shows typical red areas with white borders on the tip of this patient’s tongue.

Figure 2 – This patient has geographic tongue that is located more toward the sides and undersurface of her tongue.

Figure 3 – This patient has several characteristic patches of geographic tongue that have developed on the top surface and sides of her tongue.

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What is geographic tongue?

Geographic tongue (also known as benign migratory glossitis or erythema migrans) is a harmless condition that affects about 2% of the population. Geographic tongue is typically seen as well-defined, reddened areas on the top and sides of the tongue. These red areas usually have a slightly white or yellow-white, raised line around their edges. The condition usually waxes and wanes in severity, with the red patches appearing in one area during a period of several hours to a few days, persisting for a period of time (days to weeks to months, depending on the individual), and clearing up; however, the process usually repeats itself in a different area or areas after a few more days, weeks or months. When the condition is “active”, the tongue is often sensitive (feels like it has been scalded) to hot, spicy or acidic foods.

What causes geographic tongue?

No one really knows what causes this condition – all we know is that it is not a serious problem. It is not caused by an infection, and it is not related to any other disease. If a biopsy were to be taken from your tongue, it would look a little like psoriasis of the skin (“psoriasiform mucositis”).

Geographic tongue patients usually don’t have psoriasis; however, psoriasis is a common skin condition that also has an unknown cause, and occasionally we see a patient with both problems. This may be nothing more than coincidence in many instances.

Who gets geographic tongue?

Anyone can potentially develop geographic tongue, just like anyone can potentially develop, for example, an allergy to penicillin. Why does one person develop the allergy and the next person doesn’t? No one knows. And we can say the same for geographic tongue. No one knows why some people develop the condition. We know that this is not any sort of infection, however, so you don’t have to be worried about passing this on to anyone else.

Is there any cure for geographic tongue?

No, there is no “cure” for geographic tongue, just as there is no cure for arthritis, psoriasis or allergies. Most patients will experience this condition as a mild nuisance or irritation. Infrequently, powerful topical anti-inflammatory drugs (cortisone-like drugs) may have to be prescribed to help control the discomfort for those few patients who are very bothered by the problem.

Will it turn into cancer?

No. Geographic tongue has never been demonstrated to undergo transformation to cancer. Of course, if any oral sore develops which doesn’t behave like typical geographic tongue, the prudent thing to do would be to have it evaluated by the oral pathologist or other health care practitioner with experience in diagnosing oral disease.