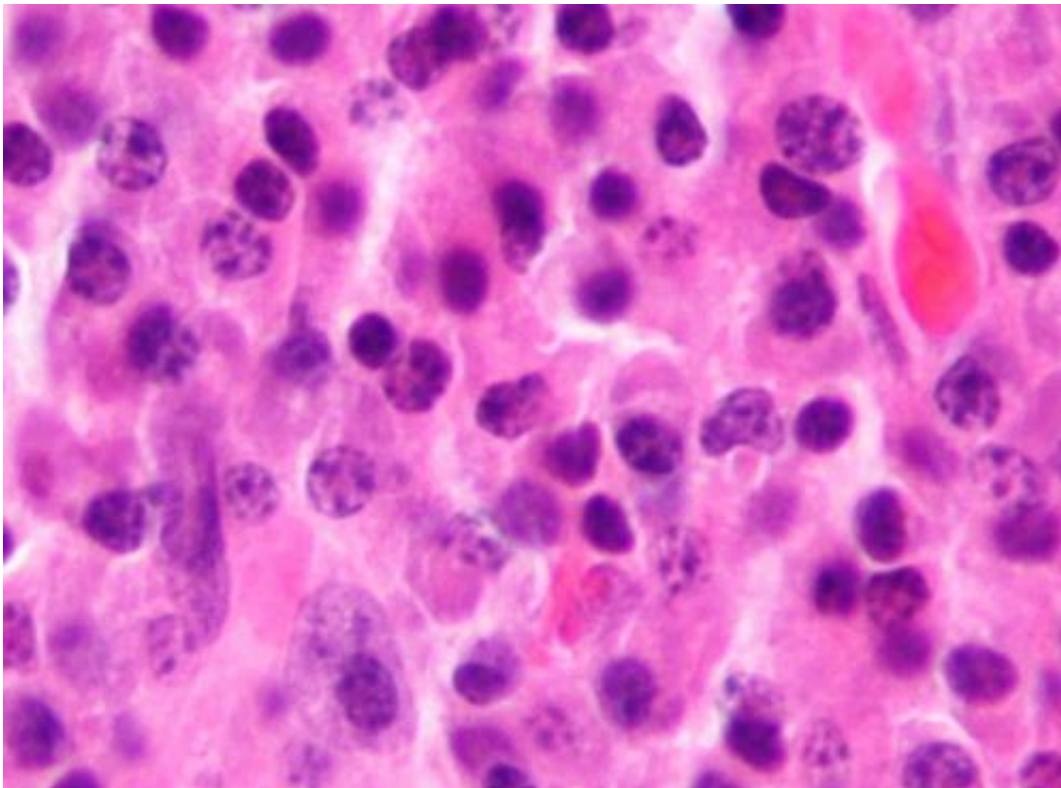


Pattern of hospital visits offers clue to spotting people at risk of myeloma

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Micrograph of a plasmacytoma, the histologic correlate of multiple myeloma. H&E stain. Credit: Wikipedia/CC BY-SA 3.0

A condition that can progress to myeloma could be identified in patients by their unusually frequent hospital visits, according to research presented at the 2019 NCRI Cancer Conference.

The study found that people with a pre-cancerous blood condition called monoclonal gammopathy of undetermined significance (MGUS) made around twice as many visits to hospital as other people of the same age.

Although [myeloma](#) is almost always preceded by MGUS, MGUS is rarely spotted. So, the researchers say this finding could help ensure myeloma is diagnosed at the earliest possible opportunity when the likelihood of successful treatment is highest.

The study was led by Dr. Maxine Lamb, a research fellow in the department of health sciences at the University of York, UK. She said: "MGUS is a benign condition that doesn't have obvious symptoms. It is usually only diagnosed incidentally when doctors are investigating other problems, so around 90% of cases remain undiagnosed.

"In the majority of people, this condition doesn't progress to cancer. However, virtually all people with myeloma, as well as a proportion of patients with some types of lymphoma, had MGUS before their cancer developed. That's why we're interested in spotting this condition."

Previous research suggests that people with MGUS are also at risk of being diagnosed with autoimmune disorders, fractures and infections. So, Dr. Lamb and her team wanted to see if it would be possible to spot MGUS cases based on how often people visited clinics and hospitals for these seemingly unrelated issues.

The study included 2,219 cases (people who were known to have MGUS) as well as 22,190 matched controls (people who had not been diagnosed with MGUS but were similar in terms of their ages, sex and where they live).

Researchers looked at data on out-patient hospital visits both before and after MGUS diagnosis and compared this with hospital visits made by

the control group. They calculated rates of hospital attendances per 100 people per month.

On average, they found that MGUS patients had 31 visits per hundred people per month in the three years prior to diagnosis. Among people not diagnosed with MGUS, this figure was 16, meaning that, on average, MGUS patients were 1.9 times as likely to have an outpatient appointment than people without MGUS.

There were even stronger patterns in certain medical specialties. For example, MGUS patients were 5.5 times more likely to visit a nephrology clinic, 3.7 times more likely to visit rheumatology and 2.4 times as likely to visit dermatology. These differences increased in the years after patients were diagnosed with MGUS.

Researchers also looked at a different blood condition, called monoclonal B-cell lymphocytosis, that can lead to other types of blood cancer and they did not see this distinctive pattern of hospital visits, suggesting it may be unique to MGUS.

Dr. Lamb said: "Once someone is diagnosed with MGUS they are monitored for signs that they are developing myeloma. Previous research suggests that myeloma patients whose MGUS had been diagnosed have better survival and we know that, in general, early diagnosis improves cancer survival chances.

"This study suggests a possible way to spot more cases of MGUS and this could give us the opportunity to try to diagnose more cases of myeloma, and some types of lymphoma, at an earlier stage."

Dr. Lamb and her team continue to study MGUS, including how the condition progresses into myeloma and other cancers.

Gordon Cook, Professor of Haematology & Myeloma Studies and Honorary Consultant Haematologist at the University of Leeds, is Chair of the NCRI Myeloma sub-group and was not involved in the research. He said: "Although [survival rates](#) for myeloma are improving, we are still diagnosing too many patients late. Approximately one in three cases are diagnosed through an emergency admission. So, improving the diagnostic rate is an unmet need.

"We believe that all cases of myeloma are preceded by MGUS but very few MGUS patients develop myeloma. Spotting MGUS early and finding those at greatest risk of developing myeloma is essential if we are to improve outcomes.

"However, it's important to remember that MGUS itself does not require treatment and the majority of people found to have MGUS will not go on to develop myeloma."

Provided by National Cancer Research Institute

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