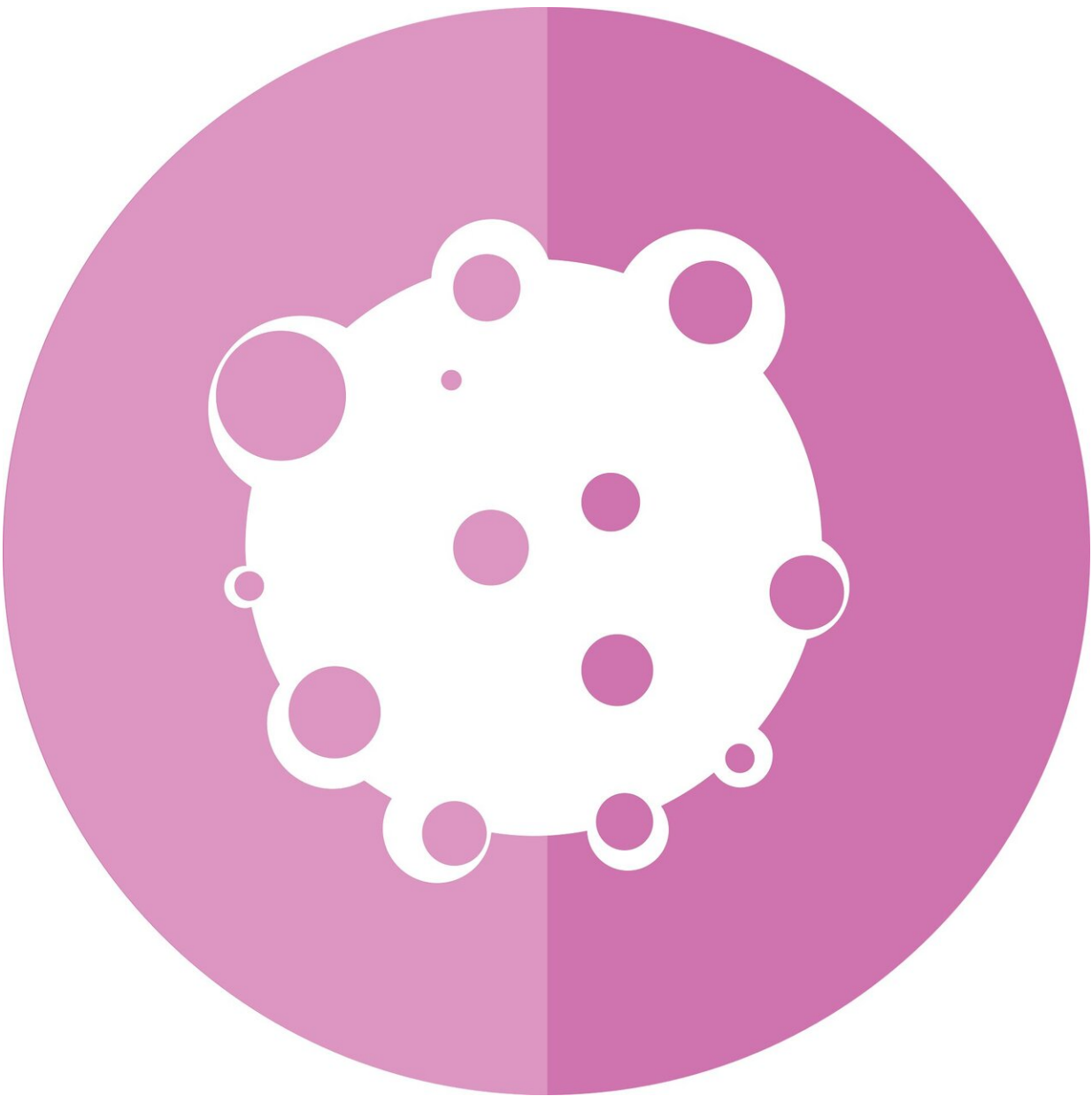


# Small uveal melanomas 'not always harmless', study finds

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A new article from Liverpool ocular researchers demonstrates that small uveal (intraocular) melanomas are not always harmless, as the current paradigm suggests.

Instead, a reasonable proportion of them have molecular genetic alterations, which categorizes them as highly [metastatic tumors](#). The article recommends that they should not be observed but rather treated immediately, to improve patients' chances of survival.

The paper shows that [uveal melanoma](#) patients with small tumors, when treated within a certain time frame in Liverpool, do indeed have improved outcomes.

The study was undertaken by researchers at Liverpool Ocular Oncology Center based at Liverpool University Hospitals NHS Foundation Trust, the Liverpool Ocular Oncology Research Group (LOORG) at the University of Liverpool and with Professor Bertil Damato, formerly of Liverpool and now based at the Ocular Oncology Service at Moorfields Eye Hospital, London.

First author Dr. Rumana Hussain, of Liverpool Ocular Oncology Center, said: "Uveal [melanoma](#) is a potentially lethal disease, with a 50% mortality rate from metastatic disease. However, traditionally, small lesions have been monitored rather than treated as it was considered that these are less likely to cause metastatic spread and that local treatment does not influence outcome.

"Liverpool is one of the only ocular oncology centers in the world that offers prognostic biopsies to all of its [melanoma patients](#), and we have

therefore collected a large molecular genetic cohort of small tumors. This is the first study to show that over a quarter of these smaller uveal melanomas have lethal genetic mutations, and suggests that we may be able to influence patient survival and mortality outcomes with earlier treatment of these small melanomas. This will cause a massive shift in the approach to such patients, both in terms of management of their primary [tumor](#), but also in terms of the consideration of prognostic biopsies in small ocular cancers."

The Liverpool Ocular Oncology Research Group's mission is to conduct high quality basic, translational and [clinical research](#) into the pathogenesis and treatment of adult ocular tumors that will improve patient care and survival.

Together with Dr. Helen Kalirai, Professor Sarah Coupland leads the basic science and translational research portfolio, in addition to being a diagnostic Consultant Pathologist at the Liverpool University Hospitals Foundation Trust. Sarah leads one of the four NHSE supra-regional Ophthalmic Pathology services, and has led the molecular [oncology](#) prognostication service for around 10 years. Professor Heinrich Heimann leads the clinical research portfolio of the LOORG and heads the Liverpool Ocular Oncology Center.

Professor Sarah Coupland said: "Since the early 1990s it was clear that uveal melanomas could be divided into differing genetic prognostic groups. This has become even more definitive through studies such as The Cancer Genome Atlas Uveal Melanoma study, to which LOORG significantly contributed. These past analyses, however, were based mainly on large tumors, and very few genetic investigations have been undertaken on small uveal melanomas, which erroneously have all been labeled as 'safe'. Our study using a unique collection of tiny intraocular biopsies of small uveal melanomas with follow-up clinical data, shows that they too can be broken down into 'good' and 'bad' tumors. Instead of

watching the latter, they can be treated earlier and thereby increase significantly the chance of cure for these patients".

**More information:** Rumana N. Hussain et al, Small High-Risk Uveal Melanomas Have a Lower Mortality Rate, *Cancers* (2021). [DOI: 10.3390/cancers13092267](https://doi.org/10.3390/cancers13092267)

Provided by University of Liverpool

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