Laser technology may provide more effective, less invasive melanoma diagnosis.

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Melanoma is the most aggressive form of skin cancer and causes the most deaths. It is especially important to catch the cancer early to ensure effective treatment. Tissue biopsies, which involve the removal of unusual moles and other skin abnormalities, are today's standard method of detection. Out of every 100 people who undergo this procedure, however, only one receives a positive result. Current methods are only about 85% accurate.

The large number of unnecessary biopsies calls for a more effective and less invasive diagnosis technique. Researchers at the Duke University Center for Molecular and Biomolecular Imaging (CMBI) have reported a promising new option, which uses a laser to identify unusually high levels of a pigment, eumelanin, which is produced in large amounts by melanoma cells. Although it is advised that patients still receive a tissue biopsy, even if they opt for the laser option, scientists hope that further studies will allow this new technique to replace biopsies entirely.

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