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## Ten-minute cancer screening possible

[R. Colin Johnson](#)

[EE Times](#)

(08/13/2007 3:26 PM EDT)

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A new in-office test for oral cancer that takes only 10 minutes will soon be available using [lab-on-a-chip microfluidic electronics](#), according to scientists supported by the [National Institutes of Health](#). Billed as the world's first fully automated, all-in-one test, the lab-on-a-chip electronic reader, which is about half the size of a toaster, can scan cells brushed from the inside of the mouth with a swab.

Crafted by the University of Texas (Austin) in the lab of Professor John McDevitt, the prototype has so far confirmed that the test can accurately perform the necessary measurements in under 10 minutes. Test development was supported by the [NIH's National Institute of Dental and Craniofacial Research](#), which plans to recommend that dentists use the test to screen for oral [cancer](#) during routine checkups.

Lab-on-a-chip concentrates the sample from the swab in microfluidic channels and then mixes fluorescent marker proteins among the cells in the sample. Any suspect cells will become fluorescent. Test results showed that the quick 10-minute test was just as accurate as the overnight flow cytometry version of the test. When [timed to the minute](#), the lab-on-a-chip test took 9 minutes and the traditional flow cytometry test took 2 hours and 5 minutes (although laboratories routinely run such tests in batches overnight).

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