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Urine test best detects alcohol use in liver transplant candidates, recipients

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Researchers from Italy confirm that urinary ethyl glucuronide (uEtG) accurately detects alcohol consumption in liver transplant candidates and recipients. The study published in *Liver Transplantation*, a journal of the American Association for the Study of Liver Diseases and the International Liver Transplantation Society, suggests that a combination of uEtG and the Alcohol Use Disorders Identification Test for alcohol consumption (AUDIT-c) are best in alerting doctors to alcohol consumption by patients undergoing evaluation for liver transplantation or who have received liver transplants.

Alcoholic liver disease is one of the most common reasons for liver transplantation in Europe and the U.S say experts. Furthermore, studies suggest that up to 49% of liver transplant recipients struggle with alcohol relapse, which may cause complications with the graft. In fact, medical evidence found that transplant recipients who relapse have a poorer survival rate than abstinent patients.

"Assessing alcohol consumption is crucial in the selection of liver transplant candidates," explains Dr. Paolo Angeli from the University of Padova in Italy. "Equally important is the ability to detect alcohol use in liver transplant recipients so early intervention for alcohol relapse can take place."

For the present study the research team evaluated the effectiveness of uEtg, AUDIT-c, serum ethanol (sETOH), urinary ethanol (uETOH), and carbohydrate-deficient transferrin (CDT) in assessing drinking status in

121 liver transplant candidates and recipients. Participants provided blood and urine samples at each visit to detect all alcohol markers.

Researchers detected alcohol consumption in 31% of participants, with uEtG found to be the strongest marker of alcohol use. Compared to CDT, uEtG was also more accurate in predicting the amount of alcohol consumption. When used together uEtG and AUDIT-c were more accurate in assessing alcohol consumption than CDT and AUDIT-c. In patients with a negative AUDIT-c, uEtG was the most effective indicator of drinking status.

The authors recommend that AUDIT-c and uEtG be routinely used in transplant candidates and recipients to monitor drinking status. Dr. Angeli concludes, "It's vital that patients abstain from damaging drinking behavior following liver transplant to avoid graft loss or even death. When used together, uEtG and AUDIT-c provide an important tool in the management of transplant patients at risk for alcohol relapse."

More information: "Assessment of Alcohol Consumption in Liver Transplant Candidates and Recipients: The Best Combination Among the Tools Available." Salvatore Piano, Lucio Marchioro, Elisabetta Gola, Silvia Rosi, Filippo Morando, Marta Cavallin, Antonietta Sticca, Silvano Fasolato, Giovanni Forza, Anna Chiara Frigo, Mario Plebani, Giacomo Zanus, Umberto Cillo, Angelo Gatta and Paolo Angeli. *Liver Transplantation*; DOI: 10.1002/lt.23881

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