

Clinical Pathology Abstracts, 3/16

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[Impact of add-on laboratory testing at an academic medical center](#)

[Autologous hematopoietic stem cell transplantation for refractory Crohn disease](#)

Impact of add-on laboratory testing at an academic medical center

Clinical laboratories are often asked to perform additional laboratory tests after the original sample is received and testing per the original order is complete. It is well known that this significantly increases laboratory workload and impacts turnaround time. The benefit of performing additional tests on existing specimens is that a patient does not have to undergo another phlebotomy venipuncture. The authors conducted a retrospective study at a large academic medical center to assess add-on ordering patterns over several years and to analyze differences in outcomes once an automated specimen archival/retrieval system was implemented. They searched the electronic health records for add-on orders placed between mid-2009 and the end of 2014 and identified 880,359 add-on tests ordered for 96,244 patients. The authors identified an average of 9.15 add-on tests per patient, with the majority of add-ons for chemistry tests (78.8 percent) and the next most frequent for hematology and coagulation tests. Inpatient units had the majority of add-ons, at 66.8 percent of the total, while the emergency department and outpatient clinics had 14.8 percent and 18.4 percent, respectively. The majority (87.3 percent) of add-on orders were placed within eight hours of original specimen collection. The results demonstrated that the introduction of a robotic specimen archival/retrieval unit saved an average of 2.75 minutes of laboratory staff manual time per add-on order. This translated to 24.1 hours per day less manual effort in dealing with add-on orders. The authors concluded that this study showed that add-on orders significantly impact workload and that robotic specimen archival/retrieval units can reduce the manual effort involved with add-on orders.

Nelson LS, Davis SR, Humble RM, et al. Impact of add-on laboratory testing at an academic medical center: a five year retrospective study [published online June 7, 2015]. *BMC Clin Pathol*. doi:10.1186/s12907-015-0011-7.

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Autologous hematopoietic stem cell transplantation for refractory Crohn disease

Crohn disease is a chronic relapsing inflammatory condition of the gastrointestinal tract that can result in ill health, impaired quality of life, and reduced life expectancy. Immunosuppressive drugs are the standard of care for Crohn disease, but some patients do not respond to this therapy. It has been suggested that hematopoietic stem cell transplant (HSCT) may benefit some of these treatment-resistant patients. Autologous HSCT will eliminate aberrant clones and replace them with uncommitted stem cells, which leads to an altered T-cell population. Case reports and series describe long-term treatment-free disease regression following autologous or allogeneic HSCT. The authors conducted the Autologous Stem Cell Transplantation International Crohn Disease (ASTIC) trial to evaluate the effect of autologous HSCT on disease activity, mucosal healing, and quality of life in Crohn disease patients resistant to other treatments. They performed the parallel-group randomized clinical trial in 11 European transplant units from July 2007 until September 2011, with follow-up through March 2013. All patients underwent HSCT before 1:1 randomization to immunoablation and HSCT or control treatment (HSCT deferred for one year). All

were given standard Crohn disease treatment as needed. The results showed that the 23 patients who underwent HSCT had no statistically significant improvement in sustained disease remission at one year and had significant toxicity compared to 22 control subjects. These adverse events included infections associated with pancytopenia induced by the conditioning regimen used for transplant. The authors concluded that these findings do not support the widespread use of HSCT for adult patients with refractory Crohn disease not amenable to surgery who had impaired quality of life.

Hawkey CJ, Allez M, Clark MM, et al. Autologous hematopoietic stem cell transplantation for refractory Crohn disease: a randomized clinical trial. *JAMA*. 2015;314(23):2524-2534.

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