

NIU Huskies' Health Services Lab Boosts Efficiency with Harvest LIS

To show school support, every Friday is "Red and Black" day at Northern Illinois University (NIU) Health Services, located in DeKalb, Illinois. Even more exciting, every year, Health Services builds and rides on a float in the Homecoming Parade! Such is the life in a student health laboratory.

Life in a Student Health Lab

What else is unique about laboratory life in a student health center? Well, for starters, the patient population consists of mainly young adults, so chemistry testing is minimal. In such a close-knit community, infections, such as Group A Strep, Mono, and STIs, make up the majority of the testing volume.

Furthermore, the testing volume fluctuates with the school calendar, beginning with a surge of TB testing each fall before classes begin. Interestingly, the international students require TB screening before they can register for classes. Most are drawn in the lab for QuantiFERON®-TB Gold (QFT) testing because the QFT test picks up latent TB, whereas the skin test can present a false positive due to interference from the bacille Calmette-Guerin (BCG) vaccination.

More Than 135 Years of Combined Lab Experience

NIU's dynamic Health Services Laboratory supports eight providers and performs an annual testing volume of approximately 24,000 tests with a staff consisting of four medical technologists, one phlebotomist, and one medical assistant. Teri Caron, MLS(ASCP), Health Services Lab Supervisor, has been

inside this issue...

2015 Symposium	2
Where in the World is Orchy?	2
Spotlight On: Tech Support	4
Proficiency Testing with API	6
2014 Plane Pull for Special Olympics	7
Rules as Tools	8
ORC Questions	10
Trade Show Calendar	12

with NIU's Health Services Laboratory for 22 years. "Between the six of us, we have over 135 years of combined laboratory experience. One of our techs can still remember when mouth pipetting and Thanksgiving turkey dinners in the lab were acceptable practices," explains Teri.

The lab performs testing in hematology, urinalysis, chemistry, immunology/ serology, and microbiology. Test orders are placed in the EHR using CPOE, and orders and results transmit electronically between Harvest LIS and the



EHR. By having Harvest LIS interfaced to its EHR, analyzers, and reference lab, NIU's Health Services Laboratory is able to provide a seamless flow of patient data in a timeframe that better meets its clinicians' needs.

Harvest LIS Supports Continuous Quality Improvement

Since becoming an Orchard customer in 2003, NIU Health Services Laboratory has continued to advance and improve its workflow and overall productivity. "With the acquisition of Orchard, the efficiency in our daily workflow has improved immensely. By going paperless, we were able to eliminate the need for a lab aide to help with patient processing and filing. We decreased our budgetary needs for paper, decreased our clerical errors, and improved our TATs significantly. The difference was phenomenal," says Teri.

Rules & Data Analytic Tools Help With the Budget

Teri also appreciates the rules and data mining functionality in Harvest LIS. Data browsers are used to verify reference lab invoices and to track test volumes and patterns, department workloads, and monthly statistics. Each day, a result browser is set to run automatically to ensure the review and proper documentation of abnormal lab test results. The lab also uses result evaluation rules for reflex

See "NIU Huskies" on page 3.

Announcing Orchard Software's 2015 User Group Meeting & Symposium!



Where in the World is Orchy?

e are excited to announce the dates and location for our 2015 annual User Group Meeting and Symposium! The 2015 event will take place in Orlando, Florida, at the Caribe Royale All-Suite Hotel & Convention Center on June 17th & 18th.



The Caribe Royale All-Suite Hotel & Convention Center is located just minutes from Walt Disney World and features a resort pool, spa, shops, on-site restaurants and a fitness center.

Orchard's annual User Group Meeting and Symposium is designed for current users and prospective clients alike, providing each with an opportunity to learn more information about the lab industry, Orchard, and Orchard's various lab information system products. Featured speakers are scheduled to provide educational opportunities in and out of the laboratory. The symposium also offers an opportunity to meet Orchard employees and other users of Orchard Software systems.



A variety of unique and entertaining speakers are on the agenda to inspire and motivate.

There is no charge to attend the event, and breakfast and lunch are included; however, attendees are responsible for the cost of travel, lodging, and additional meals. We will have a block of hotel rooms available at \$139.00 single/

double, plus tax. Please use this early announcement to reserve these dates on your calendar and begin planning with your administration.

For more information on the 2015 symposium, visit the Orchard website at www.orchardsoft.com/ symposiums. Be sure to check back frequently! We still have a lot of planning to do and we will be sure to post all of the latest developments as they happen. We look forward to seeing you in Orlando!



In addition to learning all about Orchard's newest innovations, you will have the opportunity to network with Orchard employees and other Orchard users.



rchy[™]* has set sail once again on an adventure to complete his journey around the world. While his permanent residence is on a shelf in a programmer's office, Orchy likes to travel, and has visited many U.S. cities and foreign countries. In fact, his travels have taken him to more than 40 states, more than 60 countries, and all seven continents! If you would like to see where Orchy has been, log in to the Orchard Resource Center and visit the museum! This time, Orchy has traveled to a musical wonderland located in the Pacific Northwest. If you think you know where Orchy is, send your response to news@orchardsoft. com by November 21st to be eligible to win an Orchard prize package! Last time we saw Orchy, he was visiting Sarchi, Costa Rica. Bill Stewart of Lander Medical Clinic sent in the correct location of Orchy's last quest. Make sure to visit the Orchard website to see where in the world Orchy has been lately! 🗭

*Orchy is a trademark of Orchard Software Corporation for installation of laboratory software and technical support services, namely, troubleshooting of computer software problems and maintenance of computer software.

NIU Huskies

Continued from page 1.

testing and for the addition of comments. To keep a sharp eye on the budget, Teri uses the data mining functionality to compare annual volumes and reagent costs, and finds the combination of rules and browsers invaluable to the lab's operation.

She has future plans to tackle microbiology LOINC cod-
ing as well. Teri says, "I learn so much at Advanced User
Training that it's difficult to find the time to put all the
ideas into our workflow. I look forward to a continued
partnership with Orchard and can't wait to see what they
come up with next."

AILY MAINTENANCE UP	RENALI	SIS						
Collection Date/Time	Tech	22QA RT 64-79	zzQA Humidity 20-80	zzQA Clean Spills	zzClean Push Bar	zzClean Fixed Platform	zzClean Moving Table	
2014/08/04 08:04	JAL	68	43	JAL	JAL	JAL	JAL	
2014/08/05 08:07	JAL	70	43	JAL	JAL	JAL	JAL	
2014/08/06 07:48	JAL	70	42	JAL	JAL	JAL	JAL	
2014/08/07 07:58	JAL	70	42	JAL	JAL	JAL	JAL	
2014/08/08 08:06	JAL	70	42	JAL	JAL	JAL	JAL	
2014/08/11 07:59	CY	70	45	CT .	a	a	a	
2014/08/12 08:24	KAM	70	42	KAM	KAM	KAM	KAM	
2014/08/13 08:17	CY	70	43	C	CY	a	CY	
2014/08/14 08:04	KAM	70	42	KAM	KAM	KAM	KAM	
2014/08/15 07:49	JAL	70	42	JAL	JAL	JAL	JAL	
2014/08/18 08:34	CY	70	47	CY	cr	CY	CY	L
2014/08/19 08:00	CY	70	44	a	a	a	CY	-
2014/08/20 07:43	CY	70	42	Cr	cr	CY	CY	
2014/08/21 07:55	CY	70	44	a	a	a	a	
2014/08/22 07:38	CY	70	43	Cr	cr	CY	CY	
2014/08/23 11:31	CY	68	44					
2014/08/25 07:49	CY	70	50	CT	cr	CY	CY	
2014/08/26 07:55	CT	68	43	CT	a	a	CY	
2014/08/27 07:32	CT	68	42	cr	CT	CY	CY	
2014/08/28 08:33	CY	68	42	CT	Cr	a	CY	
2014/08/29 07:48	cr	68	43	cr	cr	a	CY	
		<					+	
Selected test None se	lected							
Include rerun tests			Print File	Print All F	iles Test Co	mments	Close	_

Another Efficiency Boost: Auto-faxing of Reports

NIU's student health lab often receives orders on students from physicians outside of the university. Recently, to further improve lab efficiency, the lab implemented remote auto-faxing so that once results are approved, the report is faxed from Harvest LIS to the provider's location, resulting in a significant reduction in time, effort, and paper.

Additionally, every NCAA athlete has to have a sickle cell test performed. These results are faxed to the athletic department as well as the athlete's provider. By implementing the auto-fax feature, the time involved has greatly decreased, and the fax transmissions are tracked, allowing NIU's lab to confirm receipt.

NIU has its urinalysis analyzer maintenance files set up in Harvest LIS, making documentation and review quick and easy.

Harvest LIS Impresses COLA Inspectors

NIU Health Services Laboratory has been a shining star at Commission on Office Laboratory Accreditation (COLA) inspections, and Teri gives Harvest LIS credit for helping impress the inspectors. The lab has set up all QC files and analyzer maintenance files in Harvest LIS, making it easy to click through each one for review. "Our COLA inspectors have been impressed with our Quality Assurance program, which is in part due to the efficiency provided by Orchard Software. We can perform in-depth studies utilizing the browsers, and our QC and maintenance files are well-organized and complete, providing inspectors an easy way to verify compliance," explains Teri.

How 'bout Those LOINC Codes?

Teri's attendance at a recent Orchard Harvest LIS Advanced User Training sparked the motivation to finally bite the bullet and tackle the task of entering LOINC codes into her lab's system. Impressively, Teri has entered the majority of their LOINC codes into Harvest LIS and into their EHR, enabling their providers to track patients more easily (e.g., for patients with abnormal lipid panels).

Future Challenges

The student health lab is lucky it does not have to deal with a complicated third-party billing process because most testing is paid for through student health service fees. However, the challenges the lab faces going forward involve remaining cost effective on its in-house testing. Often, competing price-wise with large reference labs is impossible, but NIU's lab offers a markedly better turnaround time, particularly for hematology and microbiology testing. Their goal is to stay cost effective in all testing and to continue to get doctors the results they need in a timely manner.

Harvest LIS Meets the Needs of Student Health Centers Across the U.S.

In addition to NIU, Harvest LIS is being used in 68 student health centers in 28 states across the country, including eight universities that participate in the Big Ten Conference. The flexibility and configurability inherent in the development of Orchard's laboratory information systems, with ongoing input from its diverse user base, includes many powerful, flexible features capable of handling a variety of laboratory workflows and business situations.

Spotlight On: Orchard's Technical Support Department

rchard Software's Technical Support Department is consistently excelling at customer service amidst tremendous growth. Technical Support is the largest portion of the Operations division with more than 50 associates in varying levels of frontfacing client support. This group of talent is the face of Orchard. The first measure of organization for technical support is geographical; Orchard's account management and technical support resources are divided into geographic regions. This ensures that the customer is familiar with their account manager and technical support contacts, and is able to create a rapport with those associates. Additionally, this organization allows the sales team and technical support team to become intimately familiar with a company's dynamic in order to provide the best

possible attention and service. The second measure of organization is how the technical support team is separated into five tiers within their geographic regions to facilitate an escalation system for troubled issues. There are five tiers of front-line support within the Technical Support Department.

Technical Support Receptionist

Initially, when a client calls or emails technical support, their request is received by a Support Receptionist. The receptionist is responsible for the "triage" of incoming requests to the department and for answering, dispatching, and routing inbound calls.

LIS Support Specialist 1 (LISSS1)

The LISSS1 provides front-line support to Orchard clients via phone and email.

LIS Support Specialist 2 (LISSS2)

After a period of six months as an LISSS1, associates are eligible to advance to LIS Support Specialist Level 2 (LISSS2). This position requires achievement of the following competencies: label printer resolution and support, Harvest LIS level 1 troubleshooting, Harvest LIS level 2 troubleshooting, Copia troubleshooting, and HL7 troubleshooting.

LIS Support Specialist 3 (LISSS3)

After a period of six months as an LISSS2, associates are eligible to advance to LIS Support Specialist Level 3 (LISSS3). This position requires achievement of the above listed competencies, as well as Orchard Pathology troubleshooting and certification for on-site support.

See "Technical Support" on page 5.



Orchard's Technical Support Department is busy 24/7 working to meet customer needs. Here, a few of the available team members gather for a photo in the new Great Room of our expanded facility. From left to right: (front row) Mike Mayer, Nate Sweany, Rachel Puga, Roland Soe, Andrew Vertrees, Sarah McNurlan, Heather Haywood, Travis Smith, Janna Zimmerman; (middle row) Natalie Dorsch, Sheri Bowes, Shannon Corcoran, Christine Barton, Emily Kirsch, Ricky Crawford, Taylor Drummond, Alex Goodwin, John Schulte, Kyra Edging, Dana Brewer, Evan Lewis, Patrick Cunningham, Jason Woods, Zakk Roberts, Kiel Hauser, Chris Gaffer, Shaun Mohle, Melissa Densborn; (back row) Corie Adams, Deanna Krawczyk, Kevin Young, Nick Jones, Ira Williams, Erik Birch, Jared Ades, Chris Sweany, Shawn Russell, Chris Lamb, Steven Michael, Kris Cross, Chris Arnold, Jeffrey Vegh, Chris Petty, Leigh Boje, Ira Barron, Jacob Jackson.

Technical Support

Continued from page 4.

LIS Support Specialist 4 Medical Technologist (LISSS4MT)

The final level of front-line technical support is an LIS Support Specialist Level 4 MT (LISSS4MT). This position requires associates to have 10 or more years of experience as a certified Medical Technologist along with a four-year degree in science, technology, engineering, or math.

Beyond the five levels of front-line support, Orchard also has a Technical Support Team Lead for each geographic region. These team leads are available for issue escalation and serve as a liaison between direct client support, account management, and product development. Team Leads report to the Technical Support Manager who is responsible

"Orchard has grown tremendously in the past several years, but they still provide top-notch service. They have added staff members to meet the needs of their many new users, and there is no delay in us reaching someone who can assist us."

- Laboratory Director, June 2014

news@orchard is published quarterly by:

Orchard Software Corporation 701 Congressional Boulevard, Suite 360 Carmel, Indiana 46032

If you are not on our mailing list and would like to be, please call us at (800) 856-1948, fax us at (317) 573-2528, or email us at news@orchardsoft.com.

Contributing authors & editors:

Michael Brazitis	Daphne Davis
Audrey Lorraine	Kerry Foster
Kim Futrell	Christine Henderson
Chris Livengood	Debbie Schilling
Bodie Shallenberger	Meg Stanage
Nancy Stoker	Katherine Wertz

If you have any questions or suggestions, please contact our publishers, Michael Brazitis and Christine Henderson, or editor, Kerry Foster, at (800) 856-1948.

View the newsletter online at: www.orchardsoft.com/newsletters

best tools to provide your patients with excellent care. Because of this mission, we continuously assess our ability and method of providing support to you, and we are consistently open to altering our procedures and organizational structure to best support your needs.

for high-level issue escalation as well

as long-term strategic planning, ongo-

ing policy development, documenta-

tion, and functional components of the

Technical Support

Department.

At Orchard,

we make it our

mission to sup-

port your laboratory in a manner

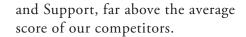
that exceeds your

expectations daily.

We want you to be

equipped with the

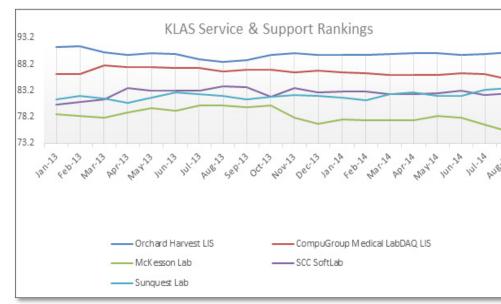
We appreciate you as our customer and also as a part of our Orchard family. Our mission and our appreciation of you is evident in our consistently high KLAS rankings and customer feedback. According to the most recent KLAS data, Orchard scored a 92.1 out of 100 in Service



For more than 20 years, our commitment to and focus on the laboratory has not wavered. Since our first installation in 1993, more than 1,500 laboratories across the country have turned to Orchard. Orchard's success comes from our commitment to both the laboratory and the changes in healthcare, and from partnering with our customers to develop, deliver, integrate, and support the very best laboratory information systems on the market.

"The support continues to be very prompt and effective, even in spite of Orchard's significant growth. We receive a callback usually within one to two hours when we leave a message. In addition, problems and malfunctions are solved with one phone call. We have never been disappointed with the support we receive from Orchard."

- Laboratory Director, April 2014



For years, Orchard has ranked highest in KLAS' Service and Support rankings. KLAS, founded in 1996, is a research and consulting firm specializing in monitoring and reporting the performance of Healthcare's Information Technology (HIT) vendors. You can learn more about KLAS by visiting www.klasresearch.com.

American Proficiency Institute Advances Laboratory Accuracy & Partners with Orchard

The Joint Commission and Clinical Laboratory Improvement Amendments (CLIA) require that laboratories enroll in the Centers for Medicare & Medicaid Services (CMS)-approved proficiency testing program for regulated analytes and maintain successful performance on their proficiency testing (PT).

American Proficiency Institute (API) has designed a transmission process called API DataDirect[™] that allows laboratories to quickly and efficiently send their proficiency testing results to API. API is one of the largest proficiency testing providers in the world, serving nearly 18,000 laboratories.

Becky Lucas, MBA, MT(ASCP), and Project Manager for DataDirect, collaborated with Orchard's Dru Marks, Systems Engineer, to develop the "Orchard Harvest LIS Proficiency Testing Export Procedures for American Proficiency Institute (API)," which can be downloaded from the Orchard Resource Center (ORC) by signing in at **www.orc.orchardsoft.com**. A quick search on API will produce the "Proficiency Testing Export – API Requirements" customer guide for download in PDF format.

According to Becky, "The process for setting it up is great. It is easy to walk through the instructions and if you want further assistance, you can always call Orchard's Technical Support. I never get bad reviews from Harvest LIS customers."

Becky says that since she sent out the email about the new procedure in July, the number of Harvest LIS users swelled from 79 to 98 for hematology. For chemistry, more than 500 total customers have uploaded more than 82,000 results since February 2014. DataDirect is currently working to get microbiology onboard for next year.

Export of proficiency test results can be accomplished using the Harvest LIS results browser. This operation requires specific configuration steps in

	public/harvest/Ho D + 🖨 C 🧶 How To Implement Proficie ×		
Orchard Resource Center Space		1	@- 🛄-
Browser Time Ranges How Can I Find Which Browsers A How To Implement A Browser		Watch 🖻 Share 🖬 Share	Tools •
Kesults Browser Example: Critical Results Repor Example: Listing Patients with 1 How To View Amended Results	The following steps are required to successfully configure the Harvest LIS browser to export the required data for proficiency to	rstng	
Proticiency Testing How To Implement Proficie	Requirements • "Patients" representing your proficiency test samples are configured in the database. • User Defined Fields are added to capture additional data required by the proficiency test agency. • Order Choices are configured that contain all the necessary tests for the proficiency test chalence.		
Order Choice Browser Order Browser Patient Browser	Order Entry rules are created to require the additional User Defined Fields to be filed for the order. Result Browser configuration is performed to capture the required data in the proper format for submission to the protici Sample Patient Setup	ency testing agency.	
How To Print the Saved Criteria Example Using the Browser to Evi Changing Versions	Patient -> New Patient Notes:		
Comments Custom Bar Codes Database Utilities	You can access the new patient window by pressing "Ctrl+N". Enter the following required information for your test patients: Last Name (Sample) Suffix (1, 2, 3, 4, or 5)	in the second se	Carlor
Deliver Finished Results Departments Edit Patient Information	First Name (PT) Sex (Male) Date of Bath (0110111960) Check "Test Patient" checkbox		
Email Embedded PDF Exporting Data	Citics Save Patient Inution to save your configuration. Repeat process for remaining test patients. You will want to configure a minimum of 5 test patients to load your sample the challenges. User Defined Fields	s for	
Faxing v	File menu -> Table Setup -> User Defined Fields		

A customer guide in the ORC provides step-by-step guidance for configuring your Harvest LIS.



Becky Lucas, MBA, MT(ASCP) American Proficiency Institute Project Manager, DataDirect Telephone: 800-333-0958 ext. 3019 Fax: 877-625-8645 Email: blucas@api-pt.com

order to ensure the integrity of the data being submitted to API DataDirect. The customer guide in the ORC offers step-by-step instructions with screenshots of the Harvest LIS configuration necessary for preparing your data in the proper format for submission to API DataDirect.

Basic Steps for Configuration:

- "Patients" representing your proficiency test samples are configured in the database.
- User-defined fields are added to capture additional data required by the proficiency test agency.
- Order choices are configured that contain all necessary tests for the proficiency test challenge.
- Order entry rules are created to require the additional user-defined fields to be filled for the order.
- Result Browser configuration is performed to capture the required data in the proper format for submission to the proficiency testing agency.

Current Harvest LIS users will need to communicate directly with Becky to set up an account on the API website in order to upload PT results.

Orchard Harvests the Power to Pull a Plane

OrchardSoftware

2014 Plane Pull

For the third year in a row, Orchard Software participated in the annual FedEx Plane Pull Challenge. The competition consists of a variety of organizations and companies vying to pull a Boeing 757 faster than their competitors. The teams of up to 20 participants compete in a tug-of-war-type race in order to move the 140,000-pound plane a lengthy 12 feet. It is a true feat that can only be accomplished through teamwork and determination.

The event is put on by Special Olympics Indiana to raise donations and awareness for more than 11,000 Special Olympics athletes from all over Indiana that compete in more than 20 Olympic-type sports. Orchard supports Special Olympics in other events, such as the Charity Golf Classic and Strikes for Special Olympics Indiana.

Although the Plane Pull was held on a rainy day this year, nothing could dampen the spirits of the participants. Orchard had two teams in the competition, Orchard Harvesting & Hauling and Orchy's Airplane Movers. Both competed valiantly in an effort that made the company proud.

The Plane Pull also offers a chance for organizations to participate in a three-on-three basketball tournament. Orchard had two teams in the competition and was proud to continue its success with a second consecutive championship. The winning team consisted of three members of the sales staff: Kevin Dudley, Ryan Todd, and Pat Smits.

It was another successful event that supports a great cause. Every team that competed worked together for a common goal to support Special Olympics Indiana. Orchard is definitely looking forward to next year's Plane Pull!



ABOVE: One of Orchard's teams, Harvesting & Hauling, poses for a team photo after their stunning effort. From left to right: (bottom row) Kerry Foster, Jon Payne, Connie Fox, Mike Brazitis, Josh Edrington; (middle row) Tom Bundy, LaTonya Henson, Emily Daniels, Merry Ricketts, Ellie McAlexander, Shannon Corcoran, Corie Adams, Kelly James, Krystal Rush; (back row) Craig Henson, Derek Ades, Nick Kirsch, Matthew Champion, Kyle Adams, Bodie Shallenberger, Ben Williams.

TOP RIGHT: Maddy Burrows and Derek Ades lead Orchard's team, Orchy's Airplane Movers, in their quest to haul the airplane!

BOTTOM RIGHT: Steven Jeter, Jr., son of Maureen Jeter, shows his amazing basketball skills as Account Executive Ryan Todd looks on during the three-on-three basketball tournament.

Technical Support: (800) 571-5835

Cross-panel Rules as Tools to Support Complex Testing Algorithms

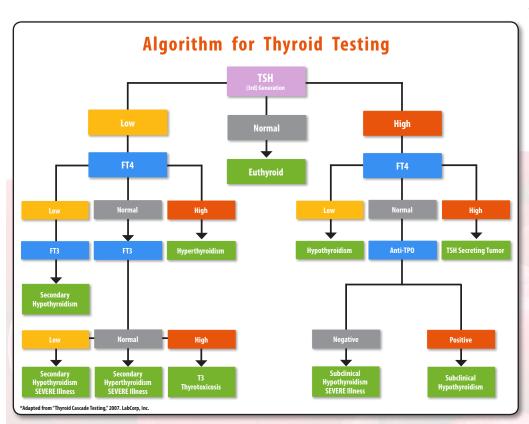
rchard Software customers have requested the ability to assign conditions based on results from multiple tests, and we have delivered! Cross-panel rules were added to the June 2014 release of Harvest LIS v9.0. What does this mean for you? Simply put, this allows a rule to look at results for the entire order when evaluating result conditions and when applying actions to those results. All test resultbased conditions defined in the Test Conditions window will be applied to all results. Likewise, all test result-based actions will be applied to all test results on the order, as appropriate. This feature is useful for performing actions on a current order choice, based on results from a different order choice.

If your laboratory has determined that testing cascades and algorithms are valuable tools to assist your clinicians, you now have the ability to automate cross-panel rules to make a greater impact on "best" test utilization. You can also support evidence-based testing algorithms by implementing algorithms that logically auto-reflex down a testing cascade based on previous results in the series. Employing evidence-based reflex testing trans-

forms your laboratory into an expert, with the goal of making test ordering easier and clearer for providers and eliminating unnecessary testing.

Thyroid Testing Cascade

Thyroid tests are performed at high frequency in a clinical laboratory. Most clinicians have accepted the notion that thyroid tests should not be ordered in tandem. A Reflex Free T4 (FT4), based



Cross-panel Rule Highlights

- Available in Harvest LIS v9.0, June 2014 release.
- Evaluates results for multiple tests within an order, panel, or sample ID in a given rule.
- Supports complex algorithms, a valuable tool to assist ordering physicians and to eliminate waste.
- Please contact Orchard Software Technical Support if you need assistance in writing rules for result evaluation.

on the result of the thyroid stimulating hormone (TSH), is standard procedure. It becomes a bit trickier from that point. What is your laboratory protocol for reflex testing based on the result of the TSH and the FT4? The diagram below illustrates a typical thyroid testing cascade.

Writing Rules to Support Thyroid Testing Cascade

To support the cascade for low TSH, you can write your rules as illustrated on the next page. This rule uses "Approval Low" for the condition, but you could also use a specific result.

Based on the first rule, Harvest LIS reflexed a FT4 because the TSH result was less than the TSH approval low. The FT4 result is low as well. The cascade indicates that if the TSH and FT4 are both low, a Free T3 should reflex next. A cross-panel rule will evaluate the results of both tests.

Now that the low TSH side of your cascade has been handled using a crosspanel rule, move to the high TSH side of the cascade and follow the same steps for setup.

See "Cross-panel Rules" on page 9.

Cross-panel Rules

Continued from page 8.

Rules - Result Evaluation Description SPCnem: TSH < Approval Low -> Reflex FI4 Inactive IP Prevent auto approval I Allow repeated Actions Suggested action: TSH < Approval Low -> Reflex FI4; Hol Order THYCASC Conditions Actions Associated Order Choices Conditions which must all be true to trigger this rule Conditions Test TSH is less than Approve Low Test TSH is less than Approve Low Institution of the prove Low			Apply to QC @ Patient QC and patient	Figure 1. Within t Evaluation Rules define the condit rule will consider	window, ions your
Description SPChem: TSH < Appr	t auto approval Allow repeated retriggering Run at pprove Low rder Choices s are true	×	Itco/AP Tests Priorities	Apply to QC @ Patient @ QC and patient	Figure 2. On the Actions tab, define the actions that the system will take if the previously defined condition is met.
	Rules - Result Evaluation Description SPChem: TSH < Approval Low -> Reflex FI4 Inactive Prevent auto approval A Conditions Test TSH is less than Approve Low Actions Suggested action: TSH < Approval Low -> R				Apply to QC @ Patient QC and patient
	Conditions Actions Associated Order Choices				
	Order Choices All Order Choices Standard Microbiology Manual E	iff CBC/Hematology AP Surgical AF	Selected order choices		
Figure 3. On the Associated Order Choices tab, select the order choices to which the rule will apply.	Order Choices Order Choices GAST BX Gastric Biopsy THIN PREP HPV CTGC Thin Prep with HPV CTG BLADDER BX Bladder Biopsy COLON BX COLON BX SCUON BX COLON BX SURG PATH 1 Surgical Pathology THIN PREP Thin Prep UR Urine Culture BMP Basic Metabolic Panel CMP Comprehensive Metabolic CYTO NG Cytopathology ESR Erpthroopte Sedimental FINA FNA HGBALC Hemoglobin ALC URIO Upid Panel MONO Mono Test MSSE QUAD Matemal Serum Screen	, olic Panel ion Rate	Selected Name THYCASC 15H-	Thyroid Cascade	
	Apply this rule to all order choices Apply this rule to all order choices associated with t Evaluate and affect all tests in the current order inst		Selected order choices All o	rder choices except Notes Clear	r Cancel Save

See "Cross-panel Rules" on page 11.

Introducing the Questions Area of the Orchard Resource Center

A s an additional tool to help you get answers quickly and efficiently, Orchard is excited to introduce an online question/answer tool. Within the Orchard Resource Center (ORC), we have added a questions area focused on providing detailed, accurate, and timely information in response to your inquiries regarding Orchard's product line.

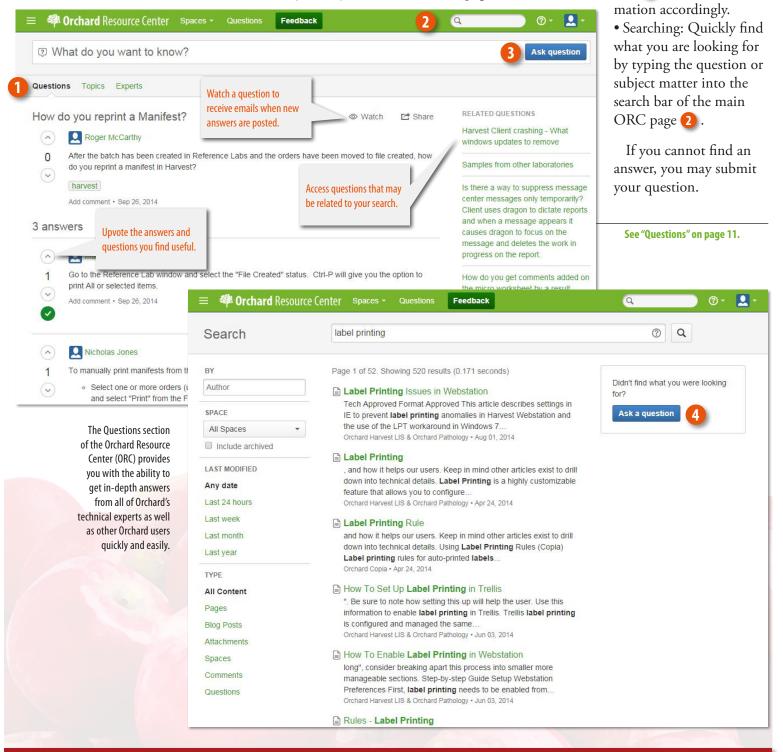
Getting Started

To get started, go to **orc.orchardsoft**. **com/questions** and sign in. This opens the main Questions page, where you can browse existing questions or topics, as well as submit new questions. If you don't have an ORC account, you will need to sign up for an account first, and then you may visit the Questions page.

Looking for Answers

Before submitting a question, you should look to see if it has already been asked. You may do so by browsing or by searching.

Browsing: From the main page, you can browse the information by question or by topic. Click the Questions or Topics links 1 to view the infor-



Questions

Continued from page 10.

Submitting Questions

If you cannot find an answer to your question through the search feature, it is easy to submit a question.

- From the main Questions page, type your question into the "What do you want to know?" field at the top, and then click Ask question 3.
- From the search results page, click the **Ask a question** button **4**.

On the Ask a question page, enter the title of your question, any supporting information, and assign one or more topics to the question. The topics you assign to the question determine under which topic(s) the question will appear when browsing the questions.

Reaping the Benefits

There are many great reasons to take advantage of our Questions feature. You can...

- Get in-depth answers from Orchard's technical experts, as well as from other Orchard users who have faced similar situations.
- Keep up-to-date with your product knowledge by watching topics. The ORC will send you an email each time a question is submitted that relates to your watched topics.
- Share your knowledge! Answer questions to obtain points and gain recognition on the forum leaderboard as an expert.

As you use this and other features of the ORC, we look forward to answering your questions, as well as hearing your feedback. To submit your feedback, simply click the **Feedback** button at the top of the ORC.

Cross-panel Rules

Continued from page 9.

. Define Fi	approval 🔲 Allow repeated retriggering 🗌 Run at o				Apply to O QC Patient O QC and patient		
	I3 ordered.; Hold selected tests: FT4; TSH; Reflex order	choices: FT3					
Order THYCASC noices							
litions Actions Associated Order C							
ditions which must all be true to tri	gger this rule						
nditions t TSH result is less than 0.3					×	Figure 4. You may n	ດໜ
t FT4 result is less than 0.5							
						up another rule for	
						next step in the cas	cad
						news stop	
	🔮 Rules - Result Evaluation						0
	Description SPChem: TSH - Thyroid Cascade I		Potlex FT3			Apply to 🔿 QC 🔘	
	🔄 Inactive 🛛 Prevent auto app	oroval 🔲 Allow repeated retri		Run at order entry		© QC and	
	Conditions Test TSH result is less than 0.3; T						
	Order THYCASC						
	Choices						
	Conditions Actions Associated Order Choic Actions to perform if all conditions are true	ces					
	Action suggested to technologist 📃 Pop	p up when reviewing results					
	Reflex FT3 ordered.						
				*			
	Actions Hold selected tests: FT4; TSH						
	Reflex order choices: FT3						
Figure 5. After							
-							
e conditions are							
efined, move to							
-							
the next tab to			Add C	C Reports	Comment Micro/AP Tests	Priorities Suppress T	ests
define actions.					orm Letters Order Choice Statu:		
ucinite							
					Hold Tests Order Defined Field		
				ign To Micro	AP Diagnoses Patient Defined Field	lds Severities Unsuppress	Tests
			Ass		Patient Defined Field		
			ASS		Patient Denned Heit	Delete	
			Ass		Patient Dennied Frei		Sav
			Ass		Patient Demico Ten	Delete	Sav
			Ass		///Prospinoses	Delete	Sav
			ASS			Notes Clear Cancel	
iles - Result Evaluation			ASS			Delete	
	yrold Cascade Low and F14 Low or Normal	-> Reflex FT3	Ass			Notes Clear Cancel	
cription SPChem: TSH - Th	yroid Cascade Low and F14 Low or Normal-					Notes Clear Cancel	
cription SPChem: TSH - Th		triggering 🗌 Run at ord				Notes Clear Cancel Apply to QC & P	
cription SPChem: TSH - Th Inactive IP Pr nditions Test TSH result is	event auto approval 🔲 Allow repeated rel less than 0.3; Test FT4 result is less than 0.5	triggering 🗌 Run at ord	ler entry			Notes Clear Cancel Apply to QC & P	
cription SPChem: TSH - Th Inactive IP Pr nditions Test TSH result is	event auto approval 🛛 Allow repeated re	triggering 🗌 Run at ord	ler entry			Notes Clear Cancel Apply to QC & P	
cription SPChem: TSH - Th Inactive IP Pr nditions Test TSH result is	event auto approval PAllow repeated rel less than 0.3; Test FT4 result is less than 0.5 x: Reflex FT3 ordered.; Hold selected tests:	triggering 🗌 Run at ord	ler entry			Notes Clear Cancel Apply to QC & P	
Actions Suggested action	event auto approval PAllow repeated rel less than 0.3; Test FT4 result is less than 0.5 re Reflex FT3 ordered.; Hold selected tests:	triggering 🗌 Run at ord	ler entry oices: FT3			Notes Clear Cancel Apply to QC & P	= atier
scription SPChem: TSH - Th Inactive @ Pr nditions Test TSH result is Actions Suggested action inditions Actions Associat Order Choices	event auto approva) 🔄 Allow repeated rel less than 0.3; Test FT4 result is less than 0.5 x: Reflex FT3 ordered; Hold selected tests: ed Order Choices	triggering	ler entry oices: FT3			Notes Clear Cancel Apply to QC & P	= atier
scription SPChem: TSH - Th Inactive IV Pr nditions Test TSH result is Actions Suggested action inditions Actions Associat Order Choices All Order Choices Standar	event auto approval Allow repeated rel less than 0.3; Test FF4 result is less than 0.5 x: Reflex FF3 ordered.; Hold selected tests: ed Order Choices d (Microbiology (Manual Diff (CBC/Hemato	triggering	ler entry oices: FT3			Notes Clear Cancel Apply to QC & P	= atier
cription SPChem: TSH - Th Inactive IV Pr ndittions Test TSH result is Actions Suggested action ndittions Actions Associat Vider Choices All Order Choices Standar	event auto approval Allow repeated re less than 0.2; Test FF4 result is less than 0.5 x: Reflex FT3 ordered; Hold selected tests: ed Order Choices d Microbiology Manual Diff (BC/Hemato Order Choices	triggering	ler entry oices: FT3	Selected order choice	5	Notes Clear Cancel Apply to QC & P	= atier
scription SPChem: TSH - Th Inactive IV Pr nditions Test TSH result is Actions Suggested action inditions Actions Associat Order Choices All Order Choices Standar	event auto approval Allow repeated rel less than 0.3; Test FF4 result is less than 0.5 x: Reflex FF3 ordered.; Hold selected tests: ed Order Choices d (Microbiology (Manual Diff (CBC/Hemato	triggering	ler entry oices: FT3	Selected order choice Selected	25 Name	Notes Clear Cancel Apply to QC & P	= atier
cription SPChem: TSH - Th active @ Pr active @ Pr Test TSH result is Actions: Suggested action actions: Actions: Association Actions: Actions:	event auto approval Allow repeated re less than 0.3, Test FF4 result is less than 0.5 is Reflex FF3 ordered; Hold selected tests: ed Order Choices Order Choices Order Choices Order Choices Order Choices Dider Choices Dider Choices Dider Choices Dider Choices Dider Choices Dider Diopy	triggering Run at orc	ler entry oices: FT3	Selected order choice Selected	25 Name	Notes Clear Cancel Apply to QC & P	
cription SPChem: TSH - Th Inactive IP Pr Inditions Test TSH result is Actions Suggested action matitions Actions Associat Order Choices All Order Choices Abbrev GAST BX THIN PREP HPV CTGC BLADDER BX COLON EX	event auto approval Allow repeated rel less than 0.3; Test FF4 result is less than 0.5 x: Reflex FF3 ordered; Hold selected tests: ed Order Choices Order Choices Order Choices Gastin Biopsy Thin Prep with HPV CTGC Bidder Biopsy COLON BX	triggering Run at orc	ier entry oices: FT3	Selected order choice Selected	25 Name	Notes Clear Cancel Apply to QC & P	= atier
cription SPChem: TSH - Th mattive VP native VP rest TSH result is Actions: Suggested action order Choices All Order Choices Standam Order Choices Abbrev GASTEX THIN PREP HPV CTGC BLADDER BX COLON BX RST	event auto approval Allow repeated release than 0.5, Test FF4 result is less than 0.5. Exeltex FF3 ordered; Hold selected tests: ed Order Choices order Choices Order Choices Order Choices Bladder Biopy COLON BX Rapid Strep Test	triggering Run at orc	Ier entry	Selected order choice Selected	25 Name	Notes Clear Cancel Apply to QC & P	= atier
cription SPChem: TSH - Th Inactive Ø Pr Actions Test TSH result is Actions Suggested action mditions Actions Associat Order Choices Abbrev GAST BX COLON BX RST SULADER BX SEXT FPOS EX	event auto approval Allow repeated re less than 0.3; Test FF4 result is less than 0.5 is Reflex FE3 ordered; Hold selected tests: ed Order Choices Order Choices Order Choices Gastric Biopsy Thin Prep with HPV CTGC Bladder Biops COLON BX Rapid Strep Test Sextant Prostate Biopsy	triggering Run at orc	ier entry oices: FT3	Selected order choice Selected	25 Name	Notes Clear Cancel Apply to QC & P	= atier
cription SPChem: TSH - Th mattive VP native VP rest TSH result is Actions: Suggested action order Choices All Order Choices Standam Order Choices Abbrev GASTEX THIN PREP HPV CTGC BLADDER BX COLON BX RST	event auto approval Allow repeated release than 0.5, Test FF4 result is less than 0.5. Exeltex FF3 ordered; Hold selected tests: ed Order Choices order Choices Order Choices Order Choices Bladder Biopy COLON BX Rapid Strep Test	triggering Run at orc	Ier entry	Selected order choice Selected	25 Name	Notes Clear Cancel Apply to QC & P	= atier
Actions SPChem: TSH - Th Inactive IP Inditions Test TSH result is I Actions: Suggested action Inditions: Actions: Associat Actions: Suggested action Actions: Actions: Associat Actions: Actions: Associat Actions: Standar Actions: All Order Choices: Atlance Atlance Order: Choices: Abbrev GAST THIN PREP HPV CTGC BLADDER BX SURG PAIT 1 SURG PAIT 1 THIN PREP UR	event auto approval Allow repeated rel less than 0.3; Test FF4 result is less than 0.5 x: Reflex FF3 ordered; Hold selected tests: ed Order Choices Order Choices Order Choices Order Choices Content Biopsy Thuin Prep with HPV CTGC Bidder Biopsy COLON BX Rapid Strep Test Sectant Protest Biopsy Surgical Pathology Thuin Prep Unine Culture	triggering Run at orc	Ier entry	Selected order choice Selected	25 Name	Notes Clear Cancel Apply to QC & P	= atier
cription SPChem: TSH - Th mattine SPChem: TSH - Th mattine SPChem: TSH - Th mattines Suggested action conditions Actions Associat Suggested action concernations Associat Order Choices Abbrev GAST BX THIN PREP HPV CTGC COLON BX RST SSURG PATH 1 THIN PREP UR BMP	event auto approval Allow repeated re less than 0.3, Test FF4 result is less than 0.5 is Reflex FF3 ordered; Hold selected tests: ed Order Choices order Choices Order Choices Order Choices Order Choices Order Choices Order Choices Castric Biopsy Thin Prep with HPV CTGC Bladder Biopsy COLON BX Rapid Step Test Sectant Prostate Biopsy Surgical Pathology Thin Prep Unine Culture Basic Metabolic Panel	triggering Run at orc	Ier entry	Selected order choice Selected	25 Name	Notes Clear Cancel Apply to QC & P	
Actions SPChem: TSH - Th Inactive IP Inditions Test TSH result is I Actions: Suggested action Inditions: Actions: Associat Actions: Suggested action Actions: Actions: Associat Actions: Actions: Associat Actions: Standar Actions: All Order Choices: Atlance Atlance Order: Choices: Abbrev GAST THIN PREP HPV CTGC BLADDER BX SURG PAIT 1 SURG PAIT 1 THIN PREP UR	event auto approval Allow repeated rel less than 0.3; Test FF4 result is less than 0.5 x: Reflex FF3 ordered; Hold selected tests: ed Order Choices Order Choices Order Choices Order Choices Content Biopsy Thuin Prep with HPV CTGC Bidder Biopsy COLON BX Rapid Strep Test Sectant Protest Biopsy Surgical Pathology Thuin Prep Unine Culture	triggering Run at orc	Ier entry	Selected order choice Selected	25 Name	Notes Clear Cancel Apply to QC & P	= atier
cription SPChem: TSH - Th Inactive IP Pr Inditions Test TSH result is I Action: Suggested action inditions Actions Associat Order Choices Standari Order Choices Standari Order Choices Abbrev GAST BX ENDORE NO BLADDER BX SURG PAH 1 THIN PREP HPV CTGC COLON EX RST SSUR PARS EX SURG PAH 1 THIN PREP UR BMP CMP ONG ESR	event auto approval Allow repeated re less than 0.3; Test FF4 result is less than 0.5 w Reflex FF3 ordered; Hold selected tests: ed Order Choices Order Choices Order Choices Order Choices Order Choices Bladder Biopy Eladore Biopy COLON BX Rapid Strep Test Sectant Protate Biopy Surgical Pathology Unne Culture Basic Metabolic Panel Comprehensive Metabolic Panel Comprehensive Metabolic Panel Comprehensive Metabolic Panel Compathology	triggering Run at orc	Ier entry	Selected order choice Selected	25 Name	Notes Clear Cancel Apply to QC & P	= atier
cription SPChem: TSH - Th mattive Pr native Pr rest TSH result is Actions: Suggested action mattitions: Actions: Associat Order Choices All Order Choices Standarr Order Choices Abbrev GAST EX THIN PREP HPV CTGC BLADDER BX COLON BX RST SSUTE PROS EX SURG PATH 1 THIN PREP UR BMP CMP CMP CMP CMP CMP CMP CMP C	event auto approval Allow repeated re less than 0.5, Test FF4 result is less than 0.5 is Reflex FF3 ordered; Hold selected tests: ed Order Choices order Choices Order Choices Order Choices Order Choices Order Choices Sature Biopsy COLON BX Rapid Step Test Sectant Prostate Biopsy COLON BX Rapid Step Test Sectant Prostate Biopsy Surgicial Pathology Thin Pep Unine Culture Basic Metabolic Panel Compenensive Metabolic Panel Cytopathology Enthroogte Sedimentation Rate FMA	triggering Run at orc	Ier entry	Selected order choice Selected	25 Name	Notes Clear Cancel Apply to QC & P	= atier
cription SPChem: TSH - Th mattine SPChem: TSH - Th mattine SPChem: TSH - Th mattines Suggested action mattines Actions Association order Choices Abbrev GAST BX COLON BX RST SPCT PROS BX SUG PATH 1 THIN PREP UR SUG PATH 1 THIN PREP COLON BX RST SPCT PROS BX SUG PATH 1 THIN PREP CATPONE SMP	event auto approval Allow repeated re less than 0.3, Test FF4 result is less than 0.5 is Reflex FF3 ordered; Hold selected tests: ed Order Choices Order Choices Order Choices Order Choices Order Choices Order Choices Gastic Biopy Colon BX Rapid Strep Test Sectant Prostate Biopy Surgical Fahology Thin Pep Basic Metabolic Panel Compenensive Metabolic Panel Contempenensive Metabolic Panel Contempenensive Metabolic Panel Contempenensive Metabolic Panel Contempenensive Sedimentation Rate FIAA Hemoglobih ALC	triggering Run at orc	Ier entry	Selected order choice Selected	25 Name	Notes Clear Cancel Apply to QC & P	= atier
cription SPChem: TSH - Th mattive Pr native Pr rest TSH result is Actions: Suggested action mattitions: Actions: Associat Order Choices All Order Choices Standarr Order Choices Abbrev GAST EX THIN PREP HPV CTGC BLADDER BX COLON BX RST SSUTE PROS EX SURG PATH 1 THIN PREP UR BMP CMP CMP CMP CMP CMP CMP CMP C	event auto approval Allow repeated re less than 0.5, Test FF4 result is less than 0.5 is Reflex FF3 ordered; Hold selected tests: ed Order Choices order Choices Order Choices Order Choices Order Choices Order Choices Sature Biopsy COLON BX Rapid Step Test Sectant Prostate Biopsy COLON BX Rapid Step Test Sectant Prostate Biopsy Surgicial Pathology Thin Pep Unine Culture Basic Metabolic Panel Compenensive Metabolic Panel Cytopathology Enthroogte Sedimentation Rate FMA	triggering Run at orc	Ier entry	Selected order choice Selected	25 Name	Notes Clear Cancel Apply to QC & P	= atier
Colphon SPChem: TSH - Th Inditions Test TSH - Th Test TSH result is I Actions: Suggested action mittions: Actions: Associat Actored Choices All Order Choices Abbrev GAST BX THIN PREP HPV CTGC BLADDER BX SURG PATH 1 THIN PREP HPV CTGC BLADDER BX SURG PATH 1 THIN PREP UR BMP CCTO NG ESR FNA HGBALC LIPID MONO MSS4 QUAD	event auto approval Allow repeated re less than 0.3; Test FF4 result is less than 0.5 is Reflex FE3 ordered; Hold selected tests: ed Order Choices Order Choices Order Choices Order Choices Gastic Biopy Thin Prep with HPV CTGC Biadder Biopy COLON BX Sectant Protate Biopy Surgical Pathology Thin Prep Unine Culture Basis (Mrdabolic Panel Comprehensive Metabolic Panel Cytopathology Enthroopte Sedimentation Rate FHA Hemoglobin ALC Lipid Panel Maternal Srum Screen 4	triggering Run at orc	Ier entry	Selected order choice Selected	25 Name	Notes Clear Cancel Apply to QC & P	
cription SPChem: TSH - Th mattine SPChem: TSH - Th mattine SPChem: TSH - Th mattines Test TSH result is 1 Actions: Suggested action inditions: Actions Associate the Choices Abarese GAST EX THIN PREP HPV CTGC BLADDER KX COLON BX RST SEXT PROS BX SURG PATH 1 THIN PREP UR BMAP CMP CMP CMP CMP CMP CMP CMP CM	event auto approval Allow repeated re less than 0.3, Test FF4 result is less than 0.5 is Reflex FF3 ordered; Hold selected tests: ed Order Choices Order Choices Subject Biopsy Coloro Nax Rapid Step Test Sectant Postate Biopsy Surgical Pathology Thin Prep Unine Culture Basic Metabolic Panel Compenensive Metabolic Panel Cytopathology Entfroote Sedimentation Rate FHA Hemoglobin A1C Lipid Panel Mono Test	triggering Run at orc	Ier entry	Selected order choice Selected	25 Name	Notes Clear Cancel Apply to QC & P	= atier
Colphon SPChem: TSH - Th Inditions Test TSH - Th Test TSH result is I Actions: Suggested action mittions: Actions: Associat Actored Choices All Order Choices Abbrev GAST BX THIN PREP HPV CTGC BLADDER BX SURG PATH 1 THIN PREP HPV CTGC BLADDER BX SURG PATH 1 THIN PREP UR BMP CCTO NG ESR FNA HGBALC LIPID MONO MSS4 QUAD	event auto approval Allow repeated re less than 0.3, Test FF4 result is less than 0.5 is Reflex FF3 ordered; Hold selected tests: ed Order Choices Order Choices Order Choices Order Choices Gastic Biopy Colicon BX Rapid Strep Test Sectant Prostate Biopy Surgical Pathology Thin Pep Unine Culture Basis Metabolic Panel Competensize Metabolic Panel Cytopathology Epthroogte Sedimentation Rate FPAA Maternal Serum Screen 4 Ocnet Bioed	triggering Run at ore	ier entry oices: FI3	Selected order choice Selected	55	Dette	= atier

Figure 6. Once all rules are configured, check the box to use cross-panel rules on the Associated Order Choices tab.

Complex Testing Cascades Made Easy

As your laboratory establishes more evidence-based testing algorithms, the use of cross-panel rules will support sophisticated testing cascades. Reflex testing cascades reduce cost and improve patient outcomes. Use result evaluation rules as tools to achieve these goals. Orchard is dedicated to developing features that will make your lab work smarter, not harder.

OrchardSoftware

Harvest the Power

701 Congressional Blvd., Suite 360 Carmel, Indiana 46032

Phone: (800) 856-1948 Fax: (317) 573-2528 Email: news@orchardsoft.com Website: www.orchardsoft.com

Learn about Orchard's new partnership with the American Proficiency Institute for reporting proficiency testing results!

2014-2015 Orchard Software Event Calendar

Date	Trade Show/Event	Location
11/8 - 11/12/14	American College of Veterinary Pathologists	Atlanta, Georgia
3/23 - 3/26/15	AMGA	Las Vegas, Nevada
3/29 - 4/1/15	CLMA	Orlando, Florida
4/12 - 4/16/15	HIMSS	Chicago, Illinois
5/5 - 5/6/15	Executive War College	New Orleans, Louisiana
5/5 - 5/8/15	Pathology Informatics	Pittsburgh, Pennsylvania
5/7 - 5/9/15	Becker's Hospital Review	Chicago, Illinois
5/18 - 5/21/15	APHL Annual Meeting	Indianapolis, Indiana
6/17 - 6/18/15	Orchard Software User Group Meeting & Symposium	Orlando, Florida
7/16 - 7/18/15	PCC Users' Conference	Burlington, Vermont
7/26 - 7/30/15	AACC Clinical Lab Expo	Atlanta, Georgia
9/8 - 9/12/15	PAINWeek	Las Vegas, Nevada