



Welch Allyn Q-Stress Stress ECG

Imported Data Elements

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Introduction

The Welch Allyn Q-Stress system data elements that are supported for import into ASCEND are listed in the following tables where

- Finding label is the label used to identify the finding within the knowledge base
- Q-Stress XML location is an XPath expression for the data in the Q-Stress XML. The actual value resides in child element named “Value”
- Value is the string text of the XML element or attribute that must be present in Q-Stress to trigger import

Scope of Q-Stress Import

Patient Demographics

Finding label	Q-Stress XML location	Value	Comments
Age	Summary/EVIDPatientAge		Age in years
Birthdate*	Summary/EVIDPatientDOBISO		yyyy-mm-dd format
Study date	Summary/EVIDStudyAcqDateISO		yyyy-mm-dd format
Study time	Summary/EVIDStudyAcqTimeISO		hh:mm:ss format hh.mm.ss format
Gender	Summary/EVIDPatientGender	FEMALE	
Gender	Summary/EVIDPatientGender	MALE	
Height*	EVIDPatientHeightValue		Inches or cm (see note)
Weight*	EVIDPatientWeightValue		Pounds or kilograms (see note)

* Note: ASCEND supports the Q-Stress software for the Q-Exchange platform version 3.6 (Welch Allyn Q-Stress software versions 3.51, 4.0.1, 4.5, 6.1.0, and 6.2). Other Q-Exchange platforms like Q-Exchange version 1.0 are not supported. Height, Weight and Birthdate are exceptions where Q-Exchange version 1.0 fields are also supported.

Q-Exchange v3.6

- EVIDPatientDOBISO
- EVIDPatientHeightValue
- EVIDPatientWeightValue

Q-Exchange v1.0

- EVIDPatientBirthdate
- EVIDPatientHeight
- EVIDPatientWeight

Study Date and Time, in Study Data

Finding label	Q-Stress XML location	Value	Comments
Study date	Summary/EVIDStudyAcqDateISO		yyyy-mm-dd format
Study time	Summary/EVIDStudyAcqTimeISO		hh:mm:ss format hh.mm.ss format

Study protocol, in Study data

Finding label	Q-Stress XML location	Value	Comments
Protocol: Bruce	Summary/EVIDProtocol	BRUCE	
Protocol: Modified bruce	Summary/EVIDProtocol	MODIFIED BRUCE	
Protocol: Naughton	Summary/EVIDProtocol	NAUGHTON	
Protocol: Balke	Summary/EVIDProtocol	BALKE	
Protocol: Ellestad	Summary/EVIDProtocol	ELLESTAD	
Protocol: Bicycle	Summary/EVIDProtocol	CYCLE	
Stress medication: Adenosine	Summary/EVIDProtocol	ADENOSINE	
Stress medication: Dipyridamole	Summary/EVIDProtocol	DIPYRIDAMOLE	
Stress medication: Dobutamine	Summary/EVIDProtocol	DOBUTAMINE	
Stress medication: Regadenoson (Lexiscan)	Summary/EVIDProtocol	LEXISCAN	
Protocol: TEXT	Summary/EVIDProtocol	<i>Value other than above</i>	
Heart rate	Summary/EVIDFinalRestingHR		
Blood pressure: Systolic	Summary/ EVIDFinalRestingSysBP		
Blood pressure: Diastolic	Summary/ EVIDFinalRestingDiaBP		
Study purpose	Summary/EVIDReasonForTest	TEXT	

Procedure narrative – pharmacologic protocol

Finding label	Q-Stress XML location	Value	Comments
Pharmacologic protocol	Summary/EVIDProtocol	<i>Any med value below</i>	
Adenosine	Summary/EVIDProtocol	ADENOSINE	
Dipyridamole	Summary/EVIDProtocol	DIPYRIDAMOLE	
Dobutamine	Summary/EVIDProtocol	DOBUTAMINE	
Regadenoson (Lexiscan)	Summary/EVIDProtocol	LEXISCAN	

Procedure narrative – exercise protocol

Finding label	Q-Stress XML location	Value	Comments
Protocol: Bruce	Summary/EvIDProtocol	BRUCE	
Protocol: Modified Bruce	Summary/EvIDProtocol	MODIFIED BRUCE	
Protocol: Naughton	Summary/EvIDProtocol	NAUGHTON	
Protocol: Balke	Summary/EvIDProtocol	BALKE	
Protocol: Ellestad	Summary/EvIDProtocol	ELLESTAD	
Protocol: Bicycle ergometry	Summary/EvIDProtocol	CYCLE	
Protocol: TEXT	Summary/EvIDProtocol	<i>text other than above</i>	
Duration	Summary/EvIDFinalTotalExerciseTime		
Final stage	Summary/EvIDLastProtocolStageAchieved		
Maximal work rate	Summary/EvIDFinalMETsAchieved		

Stress Table – Exercise (per stage)

Finding label	Q-Stress XML location	Value	Comments
TEXT	Tabular/Stage/@id		
Rest	Tabular/Stage/REST@id*		
Recovery	Tabular/Stage/RECOVERY@id*		
Velocity	Tabular/Stage/EvIDExTreadmillSpeed		Mph or km/h
Grade	Tabular/Stage/EvIDExTreadmillGrade		% incline
Time into phase	Tabular/Stage/EvIDExTotalStageTime		
Metabolic rate	Tabular/Stage/Mets		
HR	Tabular/Stage/EvIDLogCurrentHR		bpm
Systolic BP	Tabular/Stage/EvIDLogCurrentBP		mmHg
Diastolic BP	Tabular/Stage/EvIDLogCurrentBP		mmHg
Comments	Tabular/EvIDComment**		

* The recovery stages exported from the device can be filtered to import only the first and last recovery stage into the ASCEND report versus all the recovery stages.

** Comments from multiple trend plots (observations) within a stage that are aggregated in the stage and displayed by timestamp. Aggregation excludes the recovery stages because the user can un-filter to display all the recovery stages in the report, if comment aggregation is desired.

Stress table - Pharmacologic (per stage)

Finding label	Q-Stress XML location	Value	Comments
Rest	Tabular/Stage/REST@id*		
Recovery	Tabular/Stage/RECOVERY@id*		
Adenosine	Tabular/Stage/@id* and Tabular/EvIDProtocol/Adenosine		
Dipyridamole	Tabular/Stage/@id* and Tabular/EvIDProtocol/Dipyridamole		
Dobutamine	Tabular/Stage/@id* and Tabular/EvIDProtocol/Dobutamine		
Regadenoson	Tabular/Stage/@id* and Tabular/EvIDProtocol/Regadenoson		

Welch Allyn Q-Stress Imported Data Elements

Finding label	Q-Stress XML location	Value	Comments
Rate units (mcg/kg/min) **, or Dose units (mg)	---		
Time into phase	Tabular/Stage/EviDExTotalStageTime		
HR	Tabular/Stage/EviDLogCurrentHR		bpm
Systolic BP	Tabular/Stage/EviDLogCurrentBP		mmHg
Diastolic BP	Tabular/Stage/EviDLogCurrentBP		mmHg
Comments	Tabular/EviDComment***		

* Welch Allyn Q-Stress has a limitation and only exports the pharmacological stress test protocol name, but it doesn't support the export of rates/doses for separate stages of a pharmacological stress table. The ASCEND device interface replaces stages 1-n (exported from the device) with the medication name plus the units but not the medication rate/dose.

* The recovery stages exported from the device can be filtered to import only the first and last recovery stage into the ASCEND report versus all the recovery stages.

** Device interface configuration states exist to switch the infusion rate units for Adenosine, Dipyridamole, and Dobutamine from µg/kg/min to mg/min.

*** Comments from multiple trend plots (observations) within a stage are aggregated in the stage and displayed by timestamp.

Stress Data Heart Rate Response

Finding label	Q-Stress XML location	Value	Comments
Max HR achieved	Summary/EviDFinalMaxHR		bpm
Max predicted HR	Summary/ EviDStudyMaxPredictedRate		Bpm
Rate-pressure	Summary/EviDFinalMaxHRxBP		mmHg/min

Stress ECG Conclusions*

Finding label	Q-Stress XML location	Value	Comments
Exercise time	Summary/EviDFinalTotalExerciseTime		
Max ST deviation	Summary/(EviDFinalOverallIWCLLevelValue EviDEditedOWCSTLevel EviDModifiedSTLevel)		mV or mm (assumes 10mm/mV)
0 - none	Summary/EviDExerciseAngina	None	
1 - non-limiting	Summary/EviDExerciseAngina	Nonlimiting	
2 - exercise-limiting	Summary/EviDExerciseAngina	Limiting	
Duke score	Summary/EviDDukeScore		Prior to comma
Low risk	Summary/EviDDukeScore	Low	In value after comma
Moderate risk	Summary/EviDDukeScore	Moderate	In value after comma
High risk	Summary/EviDDukeScore	High	In value after comma

* The stress ECG conclusions only import for the Bruce exercise stress protocol.

Risk Factors

Finding label	Q-Stress XML location	Value	Comments
Nonsmoker	Summary/EvIDSmoker	No	
Current smoker	Summary/EvIDSmoker	Yes	
No diabetes	Summary/EvIDDiabetes	No	
Diabetes (present)	Summary/EvIDDiabetes	Yes	



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