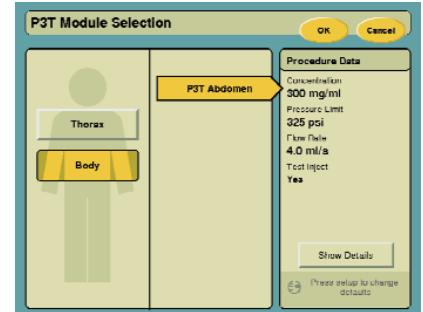




Stellant® D CT Injection System

# P<sub>3</sub>T™

## P3T Abdomen Fact Sheet



### Overview:

- P3T Abdomen is a contrast injection application that enables clinicians to automatically calculate and deliver personalized contrast injection protocols.
- P3T Abdomen is indicated for use with CT imaging of abdominal organs (i.e. liver, pancreas, and kidneys).
- P3T Abdomen is second in MEDRAD's series of Personalized Patient Protocol Technology platform that puts automated personalized patient dosing capability in clinicians' hands. P3T Abdomen joins P3T Cardiac, released in 2008, which is indicated for CT Angiography of cardiac structures, chambers of the heart, pulmonary vasculature (PE) coronaries, thoracic and abdominal aorta.
- Current methods for weight-based dosing require radiographers to take time to use look-up tables and/or make manual calculations – increasing the likelihood of costly and potentially risky errors. The process used to manually calculate weight-based dosing, and compliance with one's designated process, can vary considerably by site. (1)

### Weight-Based Dosing:

- Extensive clinical research supports weight-based contrast dosing for abdominal imaging. Three primary arguments for weight-based dosing include **patient safety**, (5) **consistent image quality**, (6) and potentially **reduced contrast** (7,2,8).
- Research shows that, as weight increases, enhancement decreases. Therefore, the appropriate contrast dose and weight should be taken into account to ensure that consistent image quality across patients is achieved (8,2).
- Despite robust clinical evidence to support weight-based dosing, it is common practice for many sites to prescribe one-size fits all protocols for CT abdomen studies. (8) A primary driver of this practice is that manual calculation of iodine dose and contrast volumes using mathematical formulas is challenging to implement consistently throughout CT departments and across technologists.
- P3T Abdomen is compatible with MEDRAD *single and dual head* Stellant CT Injection systems. However, clinical literature supports the use of a saline flush for:
  - Improved peak enhancement; (3, 4)
  - Prolonged duration of the enhancement plateau; (3) and for
  - Patient safety related to the decreased risk of contrast-induced nephropathy (5)

## P3T Abdomen Claims:

- P3T Abdomen facilitates consistency amongst clinicians in delivering a personalized contrast injection protocol.
- The P3T Abdomen application automatically adjusts contrast volume based on systematic scientific methods, according to patient, procedure, and prescribed physician parameters. This automation minimizes the need for manual calculations and the training variables inherent across dynamic clinician teams and enables consistency in individualized protocol generation.
- P3T Abdomen aids in patient safety by tailoring contrast volume according to unique patient-imaging needs. Added safety constraints on *Maximum Iodine Load* and *Maximum Flow Rate* will help ensure individualized protocols are compliant with a clinician's practice.

## P3T Abdomen Use:

- A customizable tool, P3T Abdomen offers multiple options for abdominal region contrast dosing using calculations that are well documented in clinical literature. Specifically:
  - The weight factor method accounts for both patient weight and contrast concentration when calculating contrast volume. Weight factor is expressed in grams of Iodine per kilogram of patient weight (g/kg).
  - The volume factor allows the operator to specify a dosing factor expressed in milliliters of contrast per kilogram, ml/kg. Volume-factor dosing does not account for the concentration of contrast used.
  - The iodine load factor dosing method is based on a physician's preference to give each patient a designated amount (grams) of iodine, regardless of patient weight (2). Contrast volume using iodine-load dosing is calculated based on contrast concentration.
- P3T Abdomen offers options for contrast delivery --including the option to program by flow rate (operator specifies flow rate and injection duration is calculated) or program by injection duration (operator specifies duration and injection flow rate is calculated).
- The P3T Abdomen software operates directly in the Stellant touch screen, using the same, familiar user interface elements to which customers are accustomed.

## P3T Abdomen requirements:

- Phoenix (SuperH) Hardware
- Version 104 or greater Stellant software
- Compatible with Stellant Dual and Single injectors
- DualFlow is not required

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