



Received consult for tube-feeding recommendations

#### ASSESSMENT

Patient with:

- Elevated energy and protein needs due to multiple penetrating injuries from MVA
- Increased risk for infections secondary to penetrating wounds
- Potential for impaired enteral formula tolerance s/p partial small-bowel resection

Patient may benefit from a formula with:

- Concentrated calories (due to volume sensitivity) and elevated protein
- Peptide-based protein and a specialized fat blend to optimize tolerance
- Arginine and n-3 fatty acids to help ↓ risk for infections
- Elevated antioxidants for oxidative stress

#### PLAN

Recommend Pivot 1.5 Cal starting at 25 mL/hour full strength

**Pivot 1.5 Cal** is a high-calorie, very-high-protein, immune-enhancing formula scientifically designed to meet your metabolically stressed, immunosuppressed patients' nutrition needs.

## Pivot™ 1.5 Cal

### Concentrated energy

- ▶ **1.5 Cal/mL**—concentrated calories in a small volume
- ▶ For fluid restriction

### Very high protein

- ▶ **94 g/L** (25% of calories)
- ▶ **Peptide-based protein system**
- ▶ Supports protein synthesis, tissue repair, and wound healing

### Immune support

- ▶ **Arginine**—13 g/L (3.5% of calories)
- ▶ Supports proliferation and function of immune cells and promotes wound healing<sup>1,3</sup>
- ▶ **Glutamine**—6.5 g/L (inherent in protein source)
- ▶ For GI-tract integrity and energy for immune cells<sup>4</sup>
- ▶ **Omega-3 fatty acids**—EPA\* 2.6 g/L; DHA\* 1.3 g/L
- ▶ Support immune function<sup>5</sup>



### Oxidative stress

- ▶ **Elevated levels of antioxidants**—vitamin C, 300 mg/L (500% RDI); vitamin E, 250 IU/L (835% RDI); and beta-carotene, 4.8 mg/L
- ▶ To help restore levels depleted in metabolic stress
- ▶ To help reduce/prevent production of free radicals<sup>6</sup>

### Tolerance

A unique blend of **MACRO™** ingredients designed to **promote tolerance** that uses all three macronutrient systems—protein, carbohydrate, and fat

## MACRO™ Tolerance

### I Protein: Peptide-Based

- ▶ Promotes nitrogen absorption via the dual-transport system for peptides and amino acids<sup>7</sup>
- ▶ Compared with formulas containing only free amino acids or intact protein<sup>7</sup>
- ▶ Better absorption
- ▶ Better tolerance
- ▶ Better maintenance of GI-tract integrity

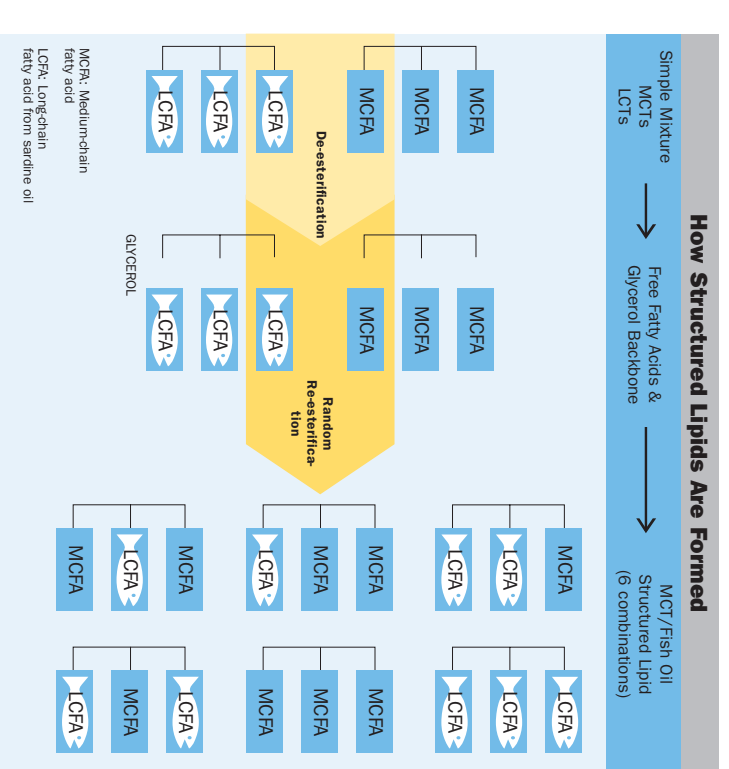
### III Fat: Structured Lipid

A structured lipid contains triglycerides composed of both **medium- and long-chain fatty acids**.

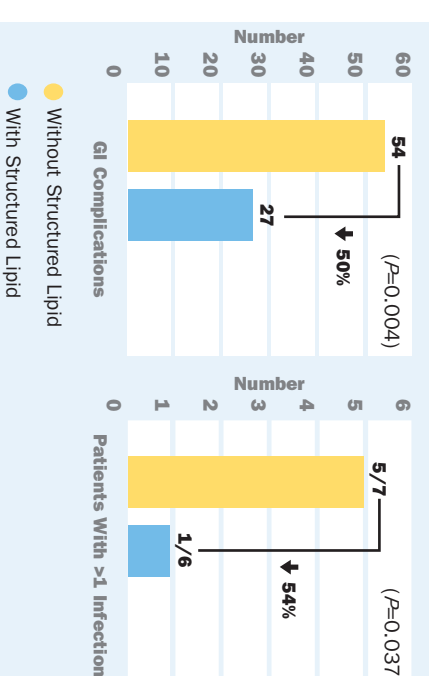
- ▶ Compared with a simple mixture, structured lipids
- ▶ Are better absorbed and tolerated<sup>9,10,12</sup>
- ▶ Are a readily available energy source for peripheral tissues
- ▶ Help reduce muscle catabolism, and improve nitrogen balance during metabolic stress<sup>13,17</sup>
- ▶ MCFAs absorbed from structured lipids provide fuel to lean tissue
- ▶ Enhance absorption of omega-3 fatty acids EPA and DHA,<sup>11,12</sup> which
- ▶ Modulate inflammation<sup>18</sup>
- ▶ Support immune function<sup>5</sup>
- ▶ Enhance absorption of fat-soluble antioxidants<sup>19</sup>

### II Carbohydrate: Fructooligosaccharides (FOS)

- ▶ FOS are prebiotics
- ▶ Fermented in the colon to short-chain fatty acids (SCFAs)
- ▶ SCFAs
- ▶ Are a preferred energy source for cells of the colon—help maintain GI-tract integrity<sup>8</sup>
- ▶ Create an acidic environment unfavorable for pathogens such as *C. difficile*<sup>8</sup>
- ▶ Stimulate water and electrolyte uptake—important for the management of diarrhea<sup>9</sup>



#### Patient Outcomes



### Structured Lipid: Clinically Demonstrated Benefits<sup>5</sup>

Subjects: 35 Evaluable post-operative, GI-malignancy patients

Experimental Product: 1.0 Cal/mL with structured lipid  
Control Product: Isocaloric, isonitrogenous formula without structured lipid

Results: Experimental group had

- ▶ 50% fewer GI complications ( $P=0.004$ )
- ▶ Better tolerance
- ▶ 54% reduction in rate of multiple infections ( $P=0.037$ )