

April 5, 2007

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Essential Fatty Acid Supplementation Guided by Bloodspot™ Fatty Acid Testing

Introduction

Review

Announcements

GI_{fx}

Porphyrin Profile

Fatty Acids

Objectives

- Determine pros and cons of specimen selection
- Apply knowledge of reported abnormal values
- Plan patient intervention strategies
- Demonstrate awareness of pattern significance

Specimens

| | | |
|------------------|------------------------|------|
| Erythrocytes | 35 Analytes + 4 Ratios | □M |
| Plasma- fasting | 35 Analytes + 4 Ratios | □M |
| Dried blood spot | 7 Analytes + 4 Ratios | Area |
| Cells + plasma | | |

Analytes

Families of w-3, w-6, w-9, saturated, trans, odd chain
Smaller list reported for DBS – simpler interpretation

Patterns

Low ω-3
Low ω-3 with High ω-6
High LA with Low GLA (or DGLA)
High ω-3
High ω-3 with Low AA
High trans

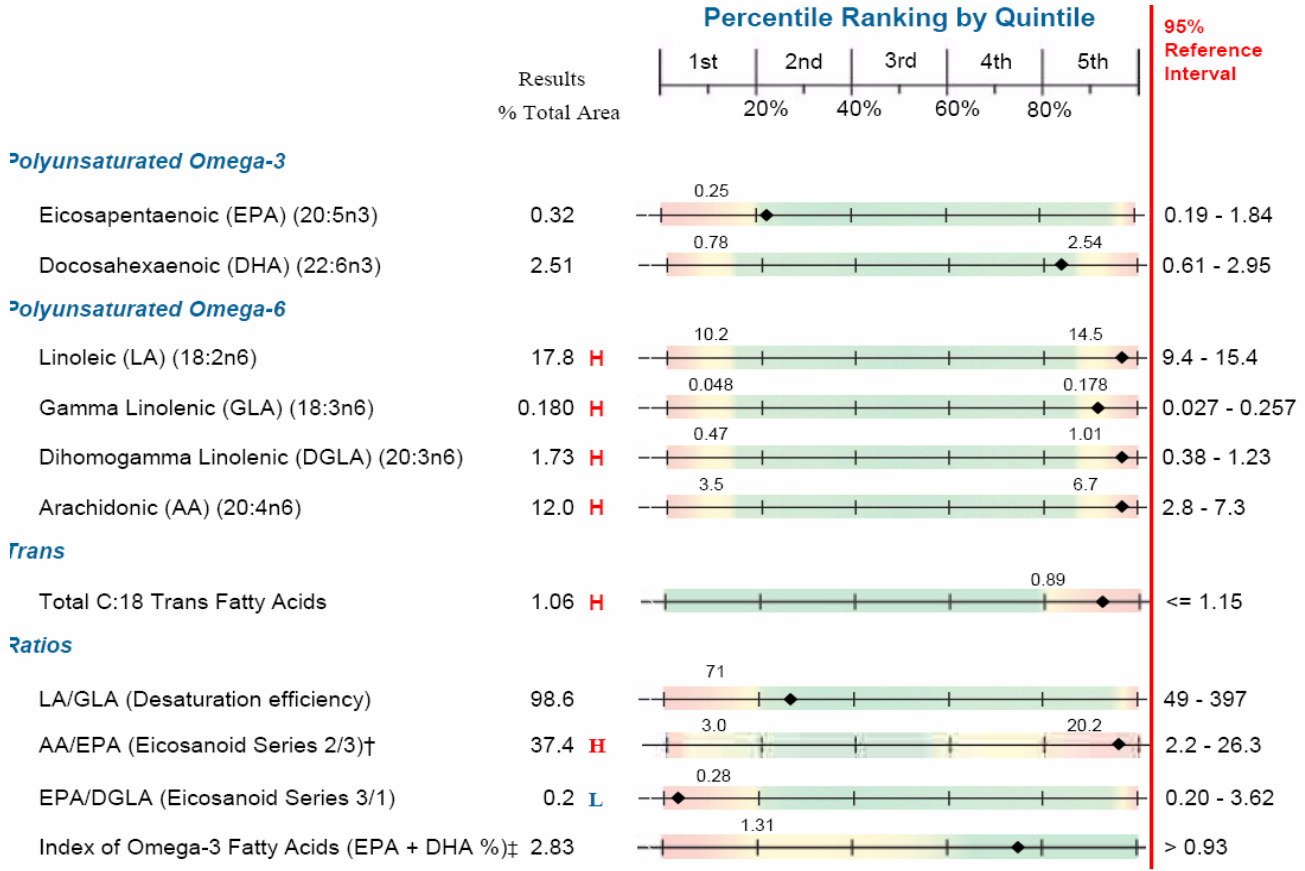
Cases

Zinc deficiency
Pro-inflammatory
Omega-3 dominant

April 5, 2007 Metamatrix Teleconference

Bloodspot™ Fatty Acids case studies

Case 1: 11 year old male presents with ADD. Symptoms include insomnia and depression. Current treatment is Adderall (dextroamphetamine/amphetamine).



| | | | | | |
|---------------------------|-------------|-----------------|-------------|------------|--------------------------|
| †Inflammatory Risk | High | Moderate | Mild | Low | Omega-3 Dominance |
| AA/EPA Ratio | > 20.2 | 8.9-12.3 | 5.8-8.9 | 3.0-5.8 | < 2.2 |

The inflammatory risk corresponds to data published by Dr. Barry Sears based on serum specimens. The numerical values from blood spot specimens are somewhat shifted. (Sears, Barry. The Omega Rx Zone. New York: Harper Collins Publishers Inc., 2002.)

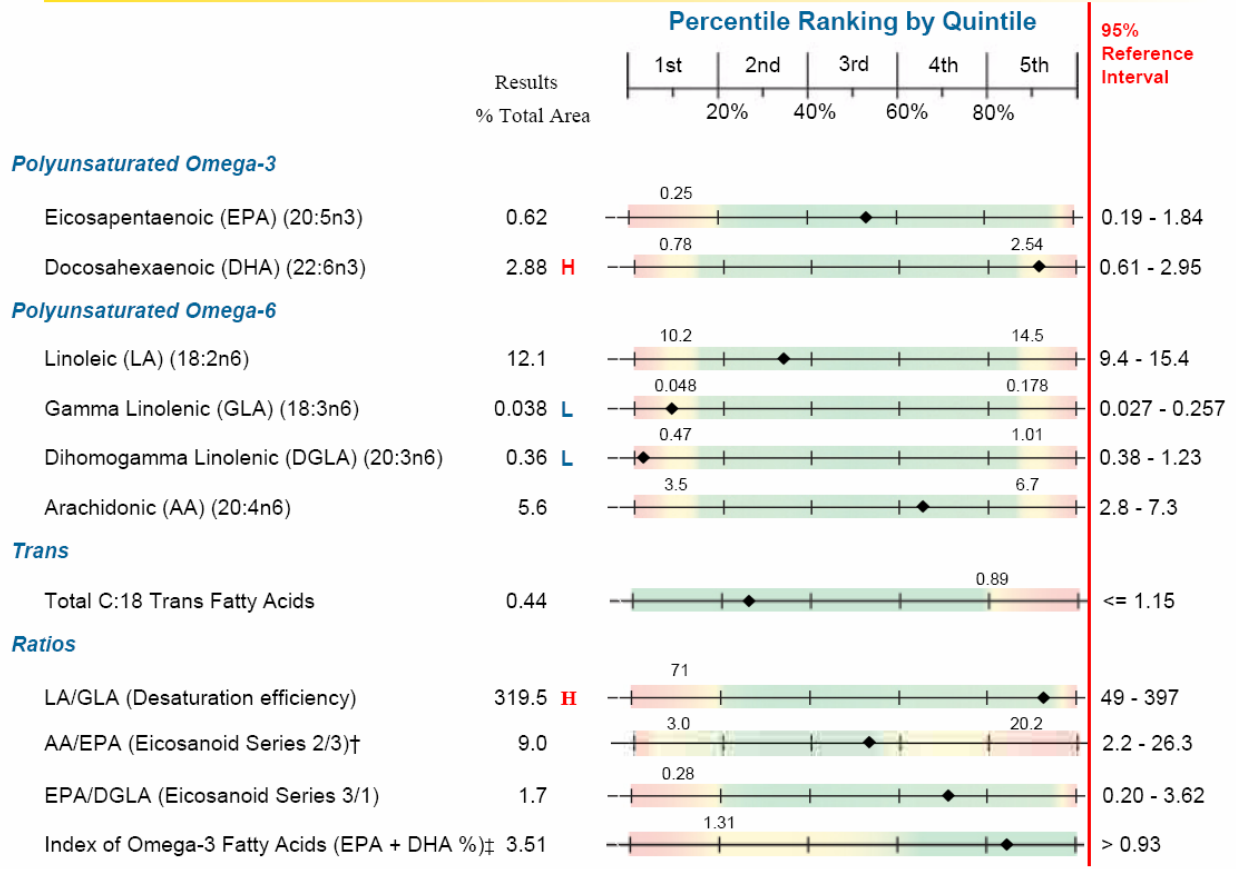
| | | | |
|--------------------------------------|-------------|---------------------|------------|
| ‡Relative Disease Risk Index* | High | Intermediate | Low |
| Index of Omega-3 Fatty Acids | < 1.3 | 1.3-2.7 | > 2.7 |

*Harris WS, von Schacky C. The Omega - 3 Index: A new risk factor for sudden cardiac death? Prev Med 2004; 39:212-20.

Case 2: 70 year old male presents with toxic metal exposure and Parkinsonism. High dose omega 3 supplementation prescribed by clinician. Other supplements: CoQ10, lipoic acid.

Designs for Health Bloodspot™ Fatty Acid Profile

Methodology: Capillary Gas Chromatography/Mass Spectrometry



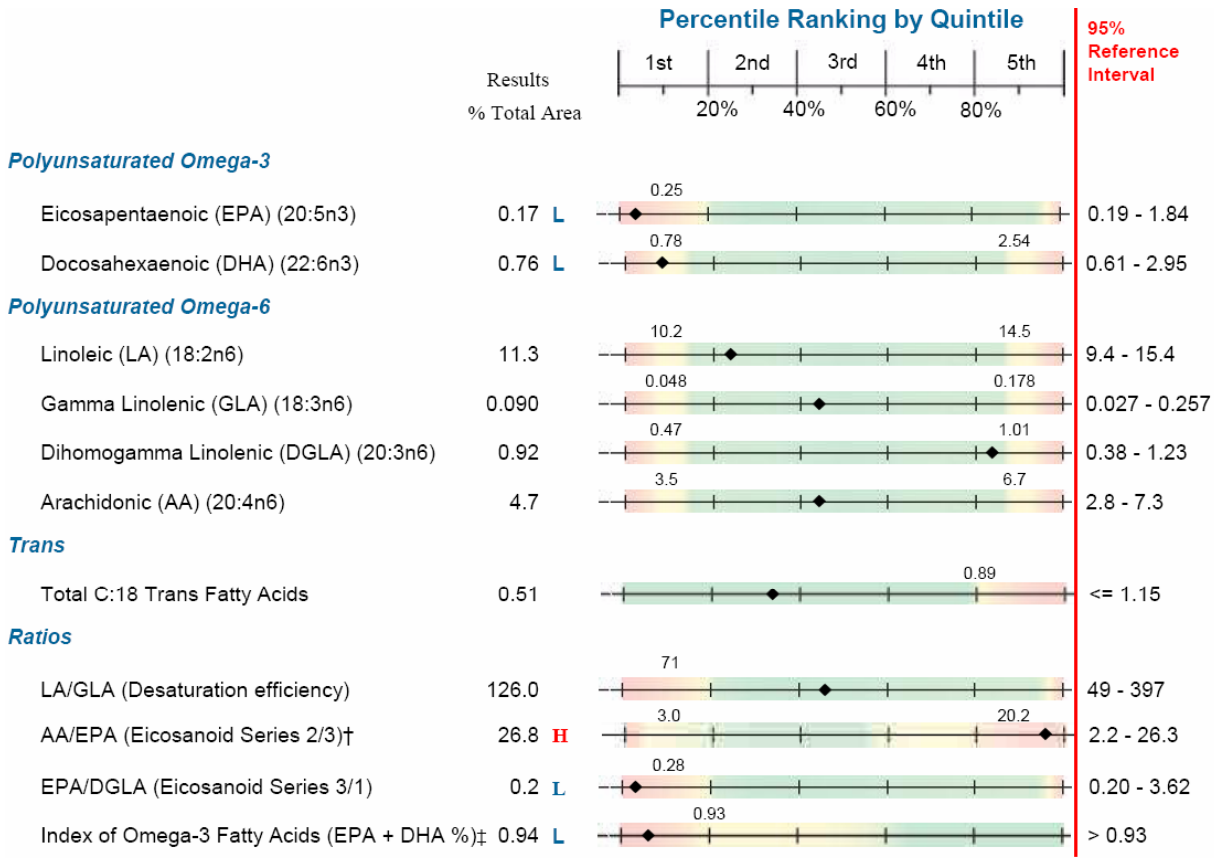
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Case 3: 8 year old male presents with ADHD. Treatment naïve.



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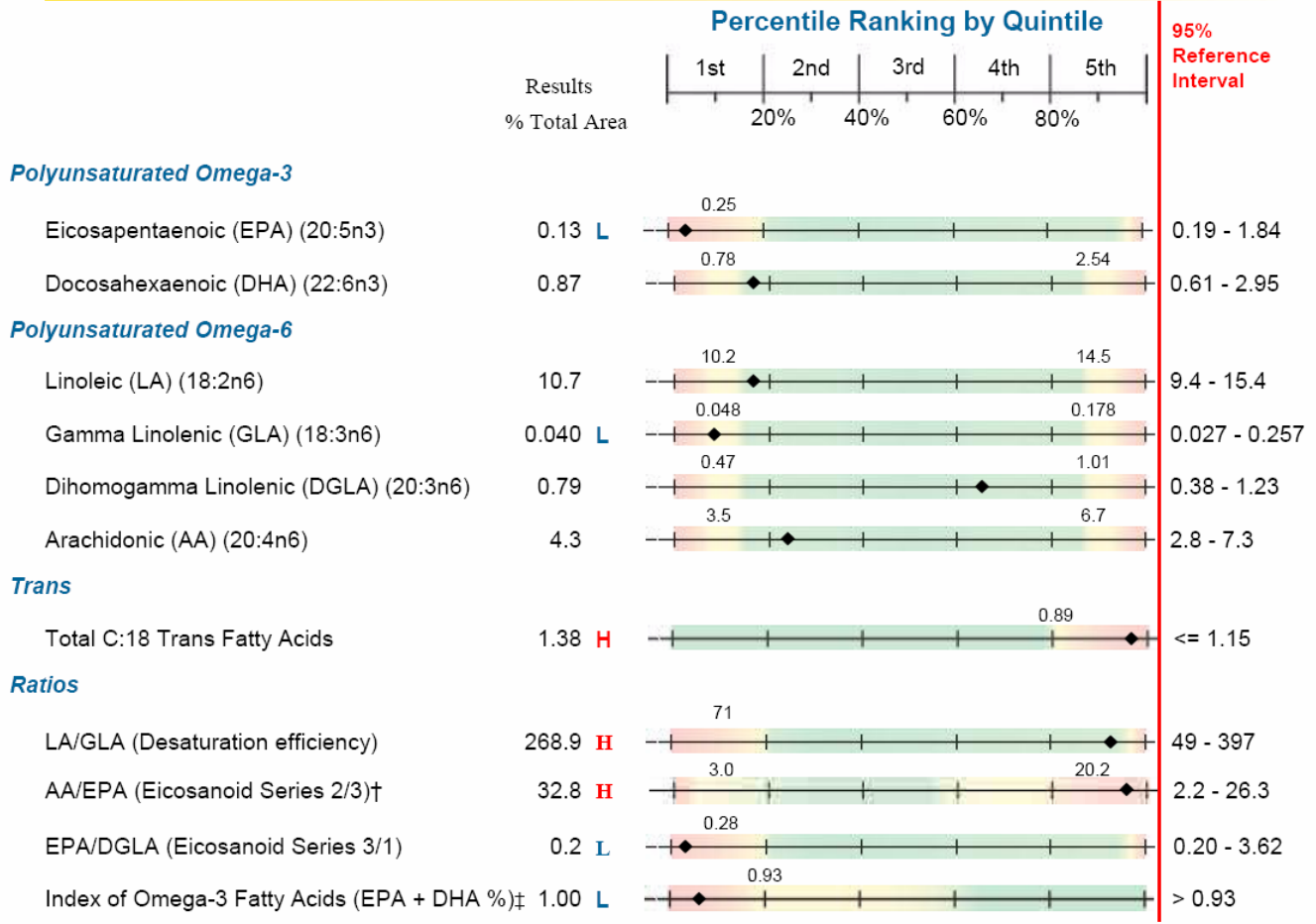
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Case 4: 15 year old male presents with constitutional short stature. No genetic or endocrine abnormality found with the exception of an elevated T3. Negative for Celiac.

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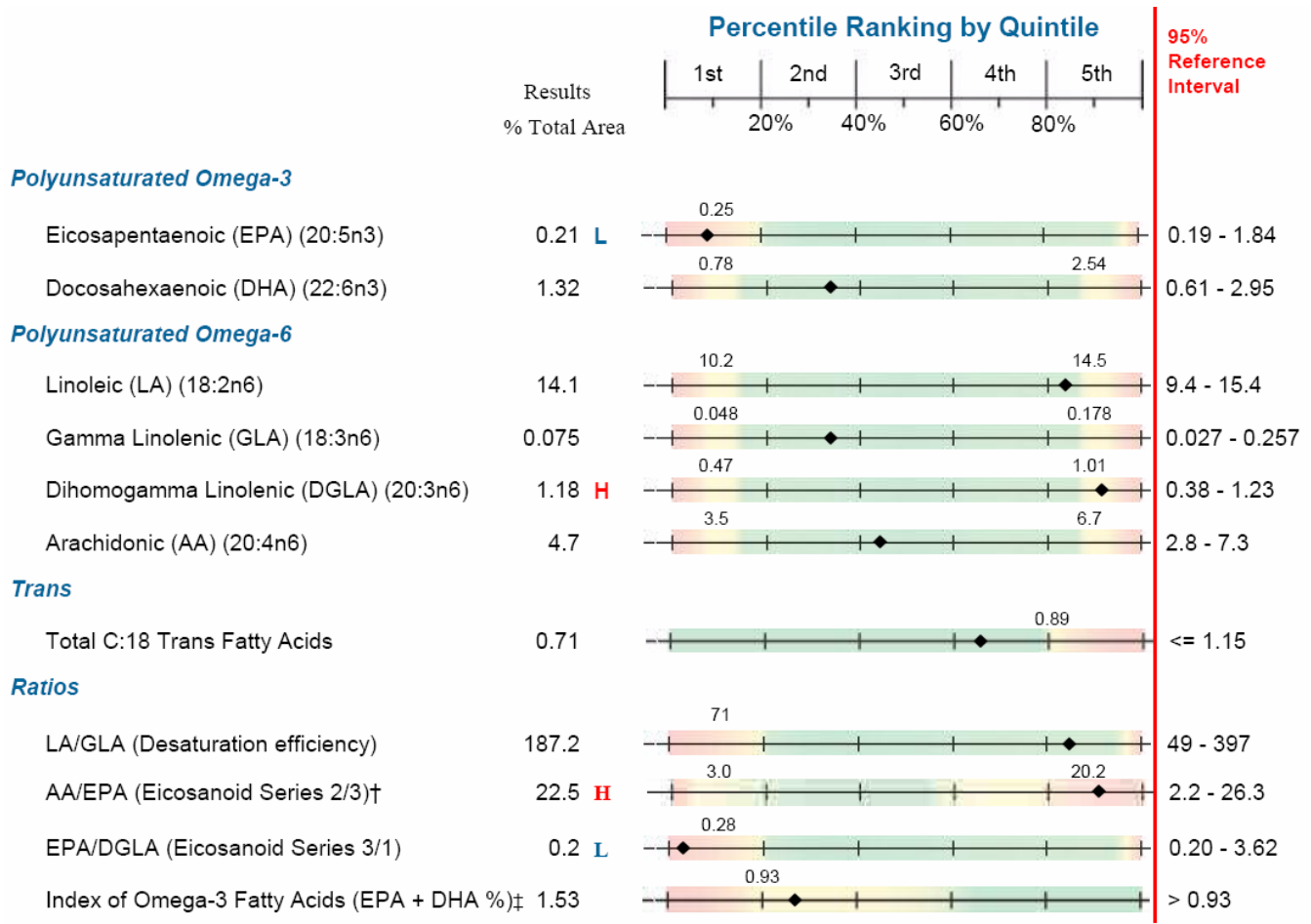
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Case 5: 85 year old male presents with COPD, chronic pneumonia, anemia. Medications include Coumadin, Procrit, lasik, ACE inhibitor. Coumadin likely causative of GI bleed causing anemia. PMH: atrial fibrillation



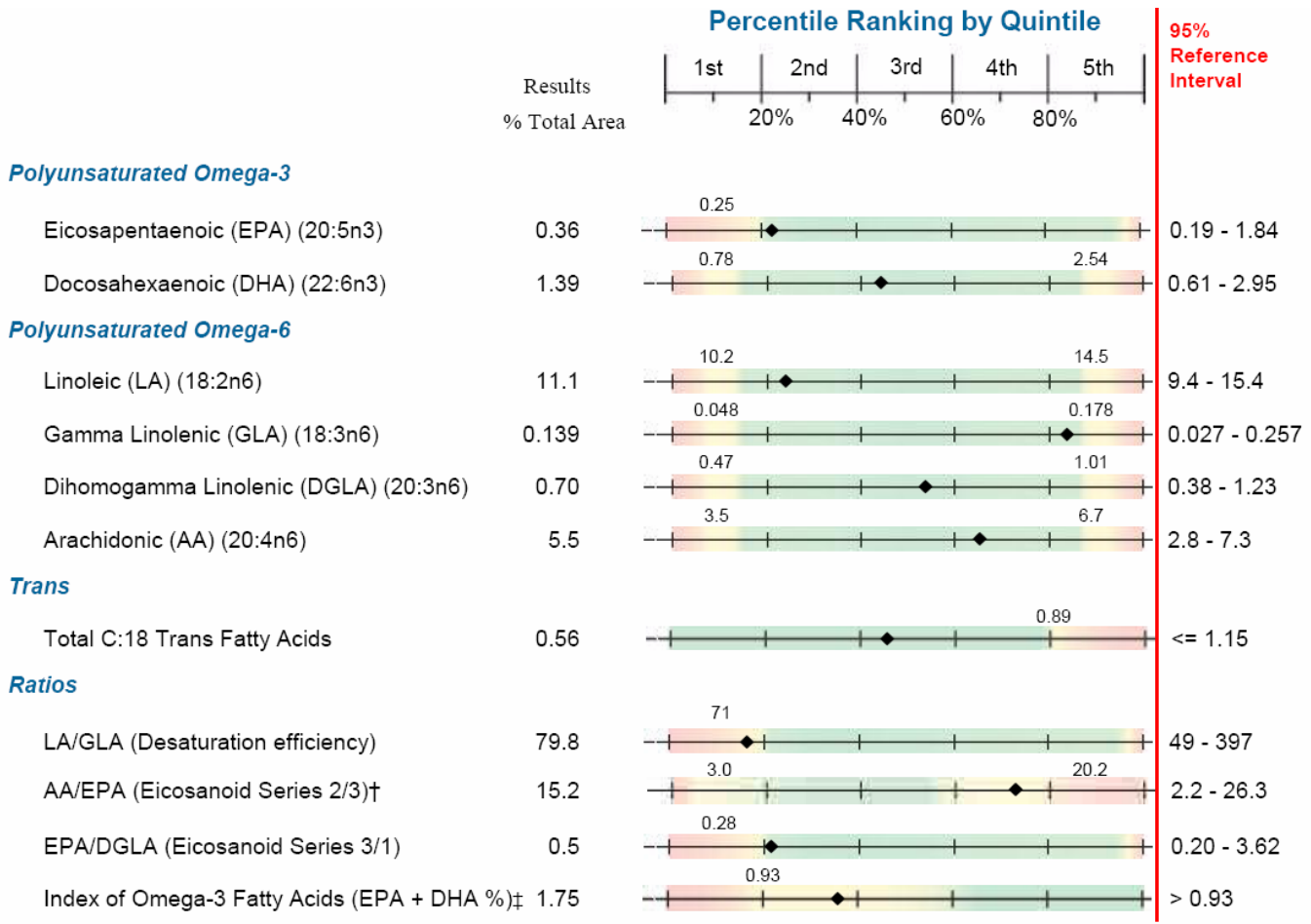
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Case 6: 56 year old female presenting with osteoarthritis, dyspepsia.



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