PATIENT INFORMATION:

# Zachary Scheel

**Phone (H):** (833) 753-1851
**DOB:** 10/18/1983
**Gender:** Male **Age:** 41
**Patient ID:** 64832968

STATUS: **Final**

**Source:** Quest
**Collection Date:** 06/04/2025 05:50 PM UTC
**Time Reported:** 06/16/2025 01:50 PM UTC
**Received:** 06/16/2025 01:52 PM UTC
**Accession Number:** SZ353494U
**Lab Ref #:** 1370254

ORDERING PHYSICIAN:

# Srinivas S Boppana, D.O.

600 Congress Avenue
Floor 14
Austin, TX, 78701

| Test | In Range | Out Of Range | Reference Range | Lab |
|---|---|---|---|---|
| FASTING:YES | | | | |
| FASTING: YES | | | | |
| **GGT** Collected: 06/04/2025 05:50 PM UTC Received: 06/04/2025 05:56 PM UTC | | | | |
| GGT | 18 | | 3-95 U/L | UL |
| **LEPTIN** Collected: 06/04/2025 05:50 PM UTC Received: 06/04/2025 05:56 PM UTC | | | | |
| LEPTIN | 2.1 | | ng/mL | EZ |

```
Reference Ranges for Leptin:

Adult Lean Subjects (18-71 years) with BMI range
of 18-25:

    Males:     0.3-13.4 ng/mL
    Females:   4.7-23.7 ng/mL

Adult Subjects (19-60 years) with BMI range
of 25-30:

    Males:     1.8-19.9 ng/mL
    Females:   8.0-38.9 ng/mL

Pediatric Reference Ranges for Leptin:

    5-9.9  years:     0.6-16.8 ng/mL
   10-13.9 years:     1.4-16.5 ng/mL
   14-17.9 years:     0.6-24.9 ng/mL

This test was developed and its analytical performance
characteristics have been determined by Quest Diagnostics.
It has not been cleared or approved by the FDA. This assay
has been validated pursuant to the CLIA regulations and is
used for clinical purposes.
```

| | | | | |
|---|---|---|---|---|
| **METHYLMALONIC ACID** Collected: 06/04/2025 05:50 PM UTC Received: 06/04/2025 05:56 PM UTC | | | | |
| METHYLMALONIC ACID | 158 | | 55-335 nmol/L | EZ |

```
Serum methylmalonic acid (MMA) levels are used to diagnose
and monitor several rare inborn errors of metabolism,
including methylmalonic aciduria. The enzymatic conversion
of MMA to succinic acid requires vitamin B12
(adenosyl-cobalamin) as a cofactor. Serum MMA levels are
also used for assessing functional vitamin B12 deficiency.
```

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| Test | In Range | Out Of Range | Reference Range | Lab |
|---|---|---|---|---|

Vitamin B12 is essential for fetal neurodevelopment, particularly early in pregnancy. Undiagnosed maternal vitamin B12 deficiency may be associated with adverse fetal/neonatal outcomes, such as neural tube defects and intrauterine growth restriction.

Quest Diagnostics utilized Multi-Modal Decomposition (MMD) analysis to establish first and second trimester-specific MMA reference intervals in pregnancy, as given below:

MMA, First trimester (<13 wks gestation): 58-167 nmol/L
MMA, Second trimester (13-23 wks gestation): 63-241 nmol/L

This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics. It has not been cleared or approved by the FDA. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes.

**TESTOSTERONE, FREE (DIALYSIS) AND TOTAL (MS)** Collected: 06/04/2025 05:50 PM UTC Received: 06/04/2025 05:56 PM UTC

| | | | | |
|---|---|---|---|---|
| TESTOSTERONE, TOTAL, MS | | 607 | 250-1100 ng/dL | EZ |

For additional information, please refer to http://education.questdiagnostics.com/faq/TotalTestosteroneLCMSMS (This link is being provided for informational/educational purposes only.)

| | | | | |
|---|---|---|---|---|
| TESTOSTERONE, FREE | | 119.7 | 35.0-155.0 pg/mL | EZ |

This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics. It has not been cleared or approved by the FDA. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes.

**ANA SCREEN, IFA, W/REFL TITER AND PATTERN** Collected: 06/04/2025 05:50 PM UTC Received: 06/04/2025 05:56 PM UTC

| | | | | |
|---|---|---|---|---|
| ANA SCREEN, IFA | | NEGATIVE | NEGATIVE | EN |

ANA IFA is a first line screen for detecting the presence of up to approximately 150 autoantibodies in various autoimmune diseases. A negative ANA IFA result suggests an ANA-associated autoimmune disease is not present at this time, but is not definitive. If there is high clinical suspicion for Sjogren's syndrome,

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ORDERING PHYSICIAN:

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| Test | In Range | Out Of Range | Reference Range | Lab |
|---|---|---|---|---|
| testing for anti-SS-A/Ro antibody should be considered. Anti-Jo-1 antibody should be considered for clinically suspected inflammatory myopathies.<br><br>AC-0: Negative<br><br>International Consensus on ANA Patterns (https://doi.org/10.1515/cclm-2018-0052)<br><br>For additional information, please refer to http://education.QuestDiagnostics.com/faq/FAQ177 (This link is being provided for informational/ educational purposes only.) | | | | |
| **RHEUMATOID FACTOR** Collected: 06/04/2025 05:50 PM UTC Received: 06/04/2025 05:56 PM UTC | | | | |
| RHEUMATOID FACTOR | <10 | | <14 IU/mL | UL |
| **THYROID PEROXIDASE AND THYROGLOBULIN ANTIBODIES** Collected: 06/04/2025 05:50 PM UTC Received: 06/04/2025 05:56 PM UTC | | | | |
| THYROGLOBULIN ANTIBODIES | <1 | | < or = 1 IU/mL | EN |
| THYROID PEROXIDASE ANTIBODIES | <1 | | <9 IU/mL | EN |
| **HOMOCYSTEINE** Collected: 06/04/2025 05:50 PM UTC Received: 06/04/2025 05:56 PM UTC | | | | |
| HOMOCYSTEINE | 9.0 | | < or = 13.5 umol/L | UL |
| Homocysteine is increased by functional deficiency of folate or vitamin B12. Testing for methylmalonic acid differentiates between these deficiencies. Other causes of increased homocysteine include renal failure, folate antagonists such as methotrexate and phenytoin, and exposure to nitrous oxide.<br>Selhub J, et al., Ann Intern Med. 1999;131(5):331-9. | | | | |
| **DHEA SULFATE** Collected: 06/04/2025 05:50 PM UTC Received: 06/04/2025 05:56 PM UTC | | | | |
| DHEA SULFATE | 295 | | 61-442 mcg/dL | EN |
| **SEX HORMONE BINDING GLOBULIN** Collected: 06/04/2025 05:50 PM UTC Received: 06/04/2025 05:56 PM UTC | | | | |
| SEX HORMONE BINDING GLOBULIN | 28 | | 10-50 nmol/L | EN |
| **FSH** Collected: 06/04/2025 05:50 PM UTC Received: 06/04/2025 05:56 PM UTC | | | | |
| FSH | 4.3 | | 1.4-12.8 mIU/mL | UL |
| **LH** Collected: 06/04/2025 05:50 PM UTC Received: 06/04/2025 05:56 PM UTC | | | | |
| LH | 3.5 | | 1.5-9.3 mIU/mL | UL |

PATIENT INFORMATION:

# Zachary Scheel

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**Received:** 06/16/2025 01:52 PM UTC
**Accession Number:** SZ353494U
**Lab Ref #:** 1370254

ORDERING PHYSICIAN:

# Srinivas S Boppana, D.O.

600 Congress Avenue
Floor 14
Austin, TX, 78701

| Test | In Range | Out Of Range | Reference Range | Lab |
|---|---|---|---|---|
| **PROLACTIN** Collected: 06/04/2025 05:50 PM UTC Received: 06/04/2025 05:56 PM UTC | | | | |
| PROLACTIN | 5.5 | | 2.0-18.0 ng/mL | UL |
| **ESTRADIOL** Collected: 06/04/2025 05:50 PM UTC Received: 06/04/2025 05:56 PM UTC | | | | |
| **ESTRADIOL** | | **43 H** | < OR = 39 pg/mL | UL |

Reference range established on post-pubertal patient population. No pre-pubertal reference range established using this assay. For any patients for whom low Estradiol levels are anticipated (e.g. males, pre-pubertal children and hypogonadal/post-menopausal females), the Quest Diagnostics Nichols Institute Estradiol, Ultrasensitive, LCMSMS assay is recommended (order code 30289).

Please note: patients being treated with the drug fulvestrant (Faslodex(R)) have demonstrated significant interference in immunoassay methods for estradiol measurement. The cross reactivity could lead to falsely elevated estradiol test results leading to an inappropriate clinical assessment of estrogen status. Quest Diagnostics order code 30289-Estradiol, Ultrasensitive LC/MS/MS demonstrates negligible cross reactivity with fulvestrant.

| | | | | |
|---|---|---|---|---|
| **PSA (FREE AND TOTAL)** Collected: 06/04/2025 05:50 PM UTC Received: 06/04/2025 05:56 PM UTC | | | | |
| PSA, TOTAL | 0.6 | | < OR = 4.0 ng/mL | EN |
| PSA, FREE | 0.3 | | ng/mL | EN |
| PSA, % FREE | 50 | | >25 % (calc) | EN |

| PSA(ng/mL) | Free PSA(%) | Estimated(x) Probability of Cancer(as%) |
|---|---|---|
| 0-2.5 | (*) | Approx. 1 |
| 2.6-4.0(1) | 0-27(2) | 24(3) |
| 4.1-10(4) | 0-10 | 56 |
| | 11-15 | 28 |
| | 16-20 | 20 |
| | 21-25 | 16 |
| | >or =26 | 8 |
| >10(+) | N/A | >50 |

References:(1)Catalona et al.:Urology 60: 469-474 (2002)
(2)Catalona et al.:J.Urol 168: 922-925 (2002)

| Free PSA(%) | Sensitivity(%) | Specificity(%) |
|---|---|---|
| < or = 25 | 85 | 19 |

PATIENT INFORMATION:

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**Accession Number:** SZ353494U
**Lab Ref #:** 1370254

ORDERING PHYSICIAN:

# Srinivas S Boppana, D.O.

600 Congress Avenue
Floor 14
Austin, TX, 78701

| Test | In Range | Out Of Range | Reference Range | Lab |
|---|---|---|---|---|
| < or = 30 | 93 | 9 | | |

(3)Catalona et al.:JAMA 277: 1452-1455 (1997)
(4)Catalona et al.:JAMA 279: 1542-1547 (1998)

(x)These estimates vary with age, ethnicity, family history and DRE results.
(*)The diagnostic usefulness of % Free PSA has not been established in patients with total PSA below 2.6 ng/mL
(+)In men with PSA above 10 ng/mL, prostate cancer risk is determined by total PSA alone.

The Total PSA value from this assay system is standardized against the equimolar PSA standard. The test result will be approximately 20% higher when compared to the WHO-standardized Total PSA (Siemens assay). Comparison of serial PSA results should be interpreted with this fact in mind.

PSA was performed using the Beckman Coulter Immunoassay method. Values obtained from different assay methods cannot be used interchangeably. PSA levels, regardless of value, should not be interpreted as absolute evidence of the presence or absence of disease.

**AMYLASE** Collected: 06/04/2025 05:50 PM UTC Received: 06/04/2025 05:56 PM UTC

| | | | |
|---|---|---|---|
| AMYLASE | 31 | 21-101 U/L | UL |

**LIPASE** Collected: 06/04/2025 05:50 PM UTC Received: 06/04/2025 05:56 PM UTC

| | | | |
|---|---|---|---|
| LIPASE | 31 | 7-60 U/L | UL |

**ZINC** Collected: 06/04/2025 05:50 PM UTC Received: 06/04/2025 05:56 PM UTC

| | | | |
|---|---|---|---|
| ZINC | 86 | 60-130 mcg/dL | EN |

This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics. It has not been cleared or approved by the FDA. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes.

**LEAD (VENOUS)** Collected: 06/04/2025 05:50 PM UTC Received: 06/04/2025 05:56 PM UTC

| | | | |
|---|---|---|---|
| LEAD (VENOUS) | <1.0 | <3.5 mcg/dL | EN |
| See Note 1 | | | |

PATIENT INFORMATION:

# Zachary Scheel

**Phone (H):** (833) 753-1851
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**Gender:** Male **Age:** 41
**Patient ID:** 64832968

STATUS: **Final**

**Source:** Quest
**Collection Date:** 06/04/2025 05:50 PM UTC
**Time Reported:** 06/16/2025 01:50 PM UTC
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**Accession Number:** SZ353494U
**Lab Ref #:** 1370254

ORDERING PHYSICIAN:

# Srinivas S Boppana, D.O.

600 Congress Avenue
Floor 14
Austin, TX, 78701

| Test | In Range | Out Of Range | Reference Range | Lab |
|---|---|---|---|---|
| Note 1<br><br>This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics. It has not been cleared or approved by the FDA. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes. | | | | |
| **OMEGACHECK(R)** Collected: 06/04/2025 05:50 PM UTC Received: 06/04/2025 05:56 PM UTC | | | | |
| EPA+DPA+DHA | 6.9 | | >5.4 % by wt | Z4M |
| This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics Cardiometabolic Center of Excellence at Cleveland HeartLab. It has not been cleared or approved by the U.S. Food and Drug Administration. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes. Increasing blood levels of long-chain n-3 fatty acids are associated with a lower risk of sudden cardiac death (1). Based on the top (75th percentile) and bottom (25th percentile) quartiles of the CHL reference population, the following relative risk categories were established for OmegaCheck: A cut-off of >=5.5% by wt defines a population at optimal relative risk, 3.8-5.4% by wt defines a population at moderate relative risk, and <=3.7% by wt defines a population at high relative risk of sudden cardiac death. The totality of the scientific evidence demonstrates that when consumption of fish oils is limited to 3 g/day or less of EPA and DHA, there is no significant risk for increased bleeding time beyond the normal range. A daily dosage of 1 gram of EPA and DHA lowers the circulating triglycerides by about 7-10% within 2 to 3 weeks. (Reference: 1-Albert et al. NEJM. 2002; 346: 1113-1118). | | | | |
| ARACHIDONIC ACID/EPA RATIO | 7.3 | | 3.7-40.7 | Z4M |
| OMEGA-6/OMEGA-3 RATIO | 6.0 | | 3.7-14.4 | Z4M |
| OMEGA-3 TOTAL | 6.9 | | % by wt | Z4M |
| EPA | 1.7 | | 0.2-2.3 % by wt | Z4M |
| DPA | 1.6 | | 0.8-1.8 % by wt | Z4M |
| DHA | 3.6 | | 1.4-5.1 % by wt | Z4M |
| OMEGA-6 TOTAL | 41.3 | | % by wt | Z4M |
| Cleveland HeartLab measures a number of omega-6 fatty acids with AA and LA being the two most abundant forms reported. | | | | |
| ARACHIDONIC ACID | 12.5 | | 8.6-15.6 % by wt | Z4M |
| LINOLEIC ACID | 25.9 | | 18.6-29.5 % by wt | Z4M |

PATIENT INFORMATION:

# Zachary Scheel

**Phone (H):** (833) 753-1851
**DOB:** 10/18/1983
**Gender:** Male **Age:** 41
**Patient ID:** 64832968

STATUS: **Final**

| | |
|---|---|
| **Source:** | Quest |
| **Collection Date:** | 06/04/2025 05:50 PM UTC |
| **Time Reported:** | 06/16/2025 01:50 PM UTC |
| **Received:** | 06/16/2025 01:52 PM UTC |
| **Accession Number:** | SZ353494U |
| **Lab Ref #:** | 1370254 |

ORDERING PHYSICIAN:

# Srinivas S Boppana, D.O.

600 Congress Avenue
Floor 14
Austin, TX, 78701

| Test | In Range | Out Of Range | Reference Range | Lab |
|---|---|---|---|---|

**Enhanced PDF Report SZ353494U-1** Collected: 06/04/2025 05:50 PM UTC Received: 06/04/2025 05:56 PM UTC

Enhanced PDF Report SZ353494U-1 **Enhanced PDF Report SZ353494U-1.pdf [See Appendix 1 for details]**

| | | |
|---|---|---|
| UL | Quest Diagnostics-Sacramento - Northgate.<br>3714 Northgate Blvd, Sacramento, CA 95834-1617 | Dir: Lorne L Holland |
| EZ | Quest Diagnostics/Nichols SJC-San Juan Capistrano,.<br>33608 Ortega Hwy, San Juan Capistrano, CA 92675-2042 | Dir: Irina Maramica MD,PhD,MBA |
| EN | Quest Diagnostics-West Hills.<br>8401 Fallbrook Ave, West Hills, CA 91304-3226 | Dir: Thomas J McDonald |
| Z4M | Cleveland HeartLab Inc.-Cleveland HeartLab Inc..<br>6701 Carnegie Ave, Suite 500, Cleveland, OH 44103-4623 | Dir: Mohammad Q Ansari |

Range Flags Legend: H - Above high normal;

Quest Diagnostics

**Report Status: Final**

**SCHEEL, ZACHARY**

| Patient Information | Specimen Information | Client Information |
|---|---|---|
| **SCHEEL, ZACHARY**<br>**DOB: 10/18/1983 AGE: 41**<br>Gender: M Fasting: Y<br>Phone: 833.753.1851<br>Patient ID: 64832968<br>Health ID: 8573036946816018 | Specimen: SZ353494U<br>Requisition: 0139137<br>Lab Ref #: 1370254<br>Collected: 06/04/2025 / 10:50 PDT<br>Received: 06/04/2025 / 23:01 PDT<br>Reported: 06/16/2025 / 06:50 PDT | Client #: 73917267 MAIL992<br>BOPPANA, SRINIVAS<br>FUNCTION HEALTH INC<br>600 CONGRESS AVE FL 14<br>AUSTIN, TX 78701-3263 |

**COMMENTS:** FASTING:YES

| Test Name | In Range | Out Of Range | Reference Range | Lab |
|---|---|---|---|---|
| TESTOSTERONE, FREE (DIALYSIS) AND TOTAL (MS) | | | | |
| TESTOSTERONE, TOTAL, MS | 607 | | 250-1100 ng/dL | EZ |
| For additional information, please refer to http://education.questdiagnostics.com/faq/TotalTestosteroneLCMSMS (This link is being provided for informational/educational purposes only.) | | | | |
| TESTOSTERONE, FREE (DIALYSIS) | | | | EZ |
| TESTOSTERONE, FREE | 119.7 | | 35.0-155.0 pg/mL | |
| This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics. It has not been cleared or approved by the FDA. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes. | | | | |
| HOMOCYSTEINE | 9.0 | | < or = 13.5 umol/L | UL |
| Homocysteine is increased by functional deficiency of folate or vitamin B12. Testing for methylmalonic acid differentiates between these deficiencies. Other causes of increased homocysteine include renal failure, folate antagonists such as methotrexate and phenytoin, and exposure to nitrous oxide. Selhub J, et al., Ann Intern Med. 1999;131(5):331-9. | | | | |
| GGT | 18 | | 3-95 U/L | UL |
| AMYLASE | 31 | | 21-101 U/L | UL |
| LIPASE | 31 | | 7-60 U/L | UL |
| THYROID PEROXIDASE AND THYROGLOBULIN ANTIBODIES | | | | |
| THYROGLOBULIN ANTIBODIES | <1 | | < or = 1 IU/mL | EN |
| THYROID PEROXIDASE ANTIBODIES | <1 | | <9 IU/mL | EN |
| LEPTIN | 2.1 | | ng/mL | EZ |

Reference Ranges for Leptin:

Adult Lean Subjects (18-71 years) with BMI range of 18-25:

Males: 0.3-13.4 ng/mL
Females: 4.7-23.7 ng/mL

Adult Subjects (19-60 years) with BMI range of 25-30:

Males: 1.8-19.9 ng/mL
Females: 8.0-38.9 ng/mL

Pediatric Reference Ranges for Leptin:

5-9.9 years: 0.6-16.8 ng/mL
10-13.9 years: 1.4-16.5 ng/mL

Quest Diagnostics

**Report Status: Final**

**SCHEEL, ZACHARY**

| Patient Information | Specimen Information | Client Information |
|---|---|---|
| **SCHEEL, ZACHARY**<br><br>**DOB: 10/18/1983** **AGE: 41**<br>Gender: M Fasting: Y<br>Patient ID: 64832968<br>Health ID: 8573036946816018 | Specimen: SZ353494U<br>Collected: 06/04/2025 / 10:50 PDT<br>Received: 06/04/2025 / 23:01 PDT<br>Reported: 06/16/2025 / 06:50 PDT | Client #: 73917267<br>BOPPANA, SRINIVAS |

| Test Name | In Range | Out Of Range | Reference Range | Lab |
|---|---|---|---|---|
| 14-17.9 years: | 0.6-24.9 ng/mL | | | |

This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics. It has not been cleared or approved by the FDA. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes.

| | | | | |
|---|---|---|---|---|
| METHYLMALONIC ACID | 158 | | 55-335 nmol/L | EZ |

Serum methylmalonic acid (MMA) levels are used to diagnose and monitor several rare inborn errors of metabolism, including methylmalonic aciduria. The enzymatic conversion of MMA to succinic acid requires vitamin B12 (adenosyl-cobalamin) as a cofactor. Serum MMA levels are also used for assessing functional vitamin B12 deficiency. Vitamin B12 is essential for fetal neurodevelopment, particularly early in pregnancy. Undiagnosed maternal vitamin B12 deficiency may be associated with adverse fetal/neonatal outcomes, such as neural tube defects and intrauterine growth restriction.

Quest Diagnostics utilized Multi-Modal Decomposition (MMD) analysis to establish first and second trimester-specific MMA reference intervals in pregnancy, as given below:

MMA, First trimester (<13 wks gestation): 58-167 nmol/L
MMA, Second trimester (13-23 wks gestation): 63-241 nmol/L

This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics. It has not been cleared or approved by the FDA. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes.

| | | | | |
|---|---|---|---|---|
| RHEUMATOID FACTOR | <10 | | <14 IU/mL | UL |
| DHEA SULFATE | 295 | | 61-442 mcg/dL | EN |
| SEX HORMONE BINDING GLOBULIN | 28 | | 10-50 nmol/L | EN |
| FSH | 4.3 | | 1.4-12.8 mIU/mL | UL |
| LH | 3.5 | | 1.5-9.3 mIU/mL | UL |
| PROLACTIN | 5.5 | | 2.0-18.0 ng/mL | UL |
| **ESTRADIOL** | | **43 H** | < OR = 39 pg/mL | UL |

Reference range established on post-pubertal patient population. No pre-pubertal reference range established using this assay. For any patients for whom low Estradiol levels are anticipated (e.g. males, pre-pubertal children and hypogonadal/post-menopausal females), the Quest Diagnostics Nichols Institute Estradiol, Ultrasensitive, LCMSMS assay is recommended (order code 30289).

Please note: patients being treated with the drug fulvestrant (Faslodex(R)) have demonstrated significant interference in immunoassay methods for estradiol measurement. The cross reactivity could lead to falsely elevated estradiol test results leading to an inappropriate clinical assessment of estrogen status.

Quest Diagnostics

**Report Status: Final**

**SCHEEL, ZACHARY**

| Patient Information | Specimen Information | Client Information |
|---|---|---|
| **SCHEEL, ZACHARY**<br><br>**DOB: 10/18/1983** **AGE: 41**<br>Gender: M Fasting: Y<br>Patient ID: 64832968<br>Health ID: 8573036946816018 | Specimen: SZ353494U<br>Collected: 06/04/2025 / 10:50 PDT<br>Received: 06/04/2025 / 23:01 PDT<br>Reported: 06/16/2025 / 06:50 PDT | Client #: 73917267<br>BOPPANA, SRINIVAS |

| Test Name | In Range | Out Of Range | Reference Range | Lab |
|---|---|---|---|---|
| Quest Diagnostics order code 30289-Estradiol, Ultrasensitive LC/MS/MS demonstrates negligible cross reactivity with fulvestrant. | | | | |
| PSA (FREE AND TOTAL) | | | | EN |
| PSA, TOTAL | 0.6 | | < OR = 4.0 ng/mL | |
| PSA, FREE | 0.3 | | ng/mL | |
| PSA, % FREE | 50 | | >25 % (calc) | |

| PSA(ng/mL) | Free PSA(%) | Estimated(x) Probability of Cancer(as%) |
|---|---|---|
| 0-2.5 | (*) | Approx. 1 |
| 2.6-4.0(1) | 0-27(2) | 24(3) |
| 4.1-10(4) | 0-10 | 56 |
| | 11-15 | 28 |
| | 16-20 | 20 |
| | 21-25 | 16 |
| | >or =26 | 8 |
| >10(+) | N/A | >50 |

References:(1)Catalona et al.:Urology 60: 469-474 (2002)
(2)Catalona et al.:J.Urol 168: 922-925 (2002)

| Free PSA(%) | Sensitivity(%) | Specificity(%) |
|---|---|---|
| < or = 25 | 85 | 19 |
| < or = 30 | 93 | 9 |

(3)Catalona et al.:JAMA 277: 1452-1455 (1997)
(4)Catalona et al.:JAMA 279: 1542-1547 (1998)

(x)These estimates vary with age, ethnicity, family history and DRE results.
(*)The diagnostic usefulness of % Free PSA has not been established in patients with total PSA below 2.6 ng/mL
(+)In men with PSA above 10 ng/mL, prostate cancer risk is determined by total PSA alone.

The Total PSA value from this assay system is standardized against the equimolar PSA standard. The test result will be approximately 20% higher when compared to the WHO-standardized Total PSA (Siemens assay). Comparison of serial PSA results should be interpreted with this fact in mind.

PSA was performed using the Beckman Coulter Immunoassay method. Values obtained from different assay methods cannot be used interchangeably. PSA levels, regardless of value, should not be interpreted as absolute evidence of the presence or absence of disease.

| | | | | |
|---|---|---|---|---|
| LEAD (VENOUS) | <1.0 | | <3.5 mcg/dL | EN |
| ***See Endnote 1*** | | | | |
| ZINC | 86 | | 60-130 mcg/dL | EN |

This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics. It has not been cleared or approved by the

Quest Diagnostics

**Report Status: Final**

**SCHEEL, ZACHARY**

| Patient Information | Specimen Information | Client Information |
|---|---|---|
| **SCHEEL, ZACHARY**<br>**DOB: 10/18/1983** **AGE: 41**<br>Gender: M Fasting: Y<br>Patient ID: 64832968<br>Health ID: 8573036946816018 | Specimen: SZ353494U<br>Collected: 06/04/2025 / 10:50 PDT<br>Received: 06/04/2025 / 23:01 PDT<br>Reported: 06/16/2025 / 06:50 PDT | Client #: 73917267<br>BOPPANA, SRINIVAS |

| Test Name | In Range | Out Of Range | Reference Range | Lab |
|---|---|---|---|---|

FDA. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes.

**Endnote 1**

This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics. It has not been cleared or approved by the FDA. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes.

Quest Diagnostics

**Report Status: Final**

**SCHEEL, ZACHARY**

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| **SCHEEL, ZACHARY**<br>**DOB: 10/18/1983** **AGE: 41**<br>Gender: M Fasting: Y<br>Patient ID: 64832968<br>Health ID: 8573036946816018 | Specimen: SZ353494U<br>Collected: 06/04/2025 / 10:50 PDT<br>Received: 06/04/2025 / 23:01 PDT<br>Reported: 06/16/2025 / 06:50 PDT | Client #: 73917267<br>BOPPANA, SRINIVAS |

## Immunology

| Test Name | Result | Reference Range | Lab |
|---|---|---|---|
| ANA SCREEN, IFA, W/REFL TITER AND PATTERN | | | EN |
| ANA SCREEN, IFA | NEGATIVE | NEGATIVE | |

ANA IFA is a first line screen for detecting the presence of up to approximately 150 autoantibodies in various autoimmune diseases. A negative ANA IFA result suggests an ANA-associated autoimmune disease is not present at this time, but is not definitive. If there is high clinical suspicion for Sjogren's syndrome, testing for anti-SS-A/Ro antibody should be considered. Anti-Jo-1 antibody should be considered for clinically suspected inflammatory myopathies.

AC-0: Negative

International Consensus on ANA Patterns (https://doi.org/10.1515/cclm-2018-0052)

For additional information, please refer to http://education.QuestDiagnostics.com/faq/FAQ177 (This link is being provided for informational/ educational purposes only.)

Physician Comments:

ClevelandHeartLab® Know your risk. | Quest Diagnostics®

**Report Status: Final**

**SCHEEL, ZACHARY**

| Patient Information | Specimen Information | Client Information |
|---|---|---|
| **SCHEEL, ZACHARY**<br>**DOB: 10/18/1983** **AGE: 41**<br>Gender: M Fasting: Y<br>Patient ID: 64832968<br>Health ID: 8573036946816018 | Specimen: SZ353494U<br>Collected: 06/04/2025 / 10:50 PDT<br>Received: 06/04/2025 / 23:01 PDT<br>Reported: 06/16/2025 / 06:50 PDT | Client #: 73917267<br>BOPPANA, SRINIVAS |

## Cardio IQ®

| Test Name | Current Result & Risk: Optimal | Current Result & Risk: Non-Optimal | Risk/Reference Interval: Optimal | Moderate | High | Units | Historical Result & Risk |
|---|---|---|---|---|---|---|---|
| **FATTY ACIDS** | | | | | | | |
| OmegaCheck® Whole Blood: (EPA+DPA+DHA) | 6.9 | | >=5.5 | 3.8-5.4 | <=3.7 | % by wt | |
| ARACHIDONIC ACID/EPA RATIO | 7.3 | | | 3.7-40.7 | | | |
| OMEGA-6/OMEGA-3 RATIO | 6.0 | | | 3.7-14.4 | | | |
| OMEGA-3 TOTAL | 6.9 | | | | | % by wt | |
| EPA | 1.7 | | | 0.2-2.3 | | % by wt | |
| DPA | 1.6 | | | 0.8-1.8 | | % by wt | |
| DHA | 3.6 | | | 1.4-5.1 | | % by wt | |
| OMEGA-6 TOTAL | 41.3 | | | | | % by wt | |
| ARACHIDONIC ACID | 12.5 | | | 8.6-15.6 | | % by wt | |
| LINOLEIC ACID | 25.9 | | | 18.6-29.5 | | % by wt | |

For details on reference ranges please refer to the reference range/comment section of the report.

**Medical Information For Healthcare Providers:** If you have questions about any of the tests in our Cardio IQ offering, please call Client Services at our Quest Diagnostics-Cleveland HeartLab Cardiometabolic Center of Excellence. They can be reached at 866.358.9828, option 1 to arrange a consult with our clinical education team.

ClevelandHeartLab® Know your risk. | Quest Diagnostics®

**Report Status: Final**

**SCHEEL, ZACHARY**

| Patient Information | Specimen Information | Client Information |
|---|---|---|
| **SCHEEL, ZACHARY**<br><br>**DOB: 10/18/1983** **AGE: 41**<br>Gender: M Fasting: Y<br>Patient ID: 64832968<br>Health ID: 8573036946816018 | Specimen: SZ353494U<br>Collected: 06/04/2025 / 10:50 PDT<br>Received: 06/04/2025 / 23:01 PDT<br>Reported: 06/16/2025 / 06:50 PDT | Client #: 73917267<br>BOPPANA, SRINIVAS |

**Reference Range/Comments**

| Analyte Name | In Range | Out Range | Reference Range | Lab |
|---|---|---|---|---|
| ARACHIDONIC ACID | **12.5** | | 8.6-15.6 % by wt | Z4M |
| ARACHIDONIC ACID/EPA RATIO | **7.3** | | 3.7-40.7 | Z4M |
| DHA | **3.6** | | 1.4-5.1 % by wt | Z4M |
| DPA | **1.6** | | 0.8-1.8 % by wt | Z4M |
| EPA | **1.7** | | 0.2-2.3 % by wt | Z4M |
| EPA+DPA+DHA | **6.9** | | >5.4 % by wt | Z4M |
| This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics Cardiometabolic Center of Excellence at Cleveland HeartLab. It has not been cleared or approved by the U.S. Food and Drug Administration. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes. Increasing blood levels of long-chain n-3 fatty acids are associated with a lower risk of sudden cardiac death (1). Based on the top (75th percentile) and bottom (25th percentile) quartiles of the CHL reference population, the following relative risk categories were established for OmegaCheck: A cut-off of >=5.5% by wt defines a population at optimal relative risk, 3.8-5.4% by wt defines a population at moderate relative risk, and <=3.7% by wt defines a population at high relative risk of sudden cardiac death. The totality of the scientific evidence demonstrates that when consumption of fish oils is limited to 3 g/day or less of EPA and DHA, there is no significant risk for increased bleeding time beyond the normal range. A daily dosage of 1 gram of EPA and DHA lowers the circulating triglycerides by about 7-10% within 2 to 3 weeks. (Reference: 1-Albert et al. NEJM. 2002; 346: 1113-1118). | | | | |
| LINOLEIC ACID | **25.9** | | 18.6-29.5 % by wt | Z4M |
| OMEGA-3 TOTAL | **6.9** | | % by wt | Z4M |
| OMEGA-6 TOTAL | **41.3** | | % by wt | Z4M |
| Cleveland HeartLab measures a number of omega-6 fatty acids with AA and LA being the two most abundant forms reported. | | | | |
| OMEGA-6/OMEGA-3 RATIO | **6.0** | | 3.7-14.4 | Z4M |

**PERFORMING SITE:**

EN QUEST DIAGNOSTICS-WEST HILLS, 8401 FALLBROOK AVENUE, WEST HILLS, CA 91304-3226 Laboratory Director: THOMAS MCDONALD, MD, CLIA: 05D0642827
EZ QUEST DIAGNOSTICS/NICHOLS SJC, 33608 ORTEGA HWY, SAN JUAN CAPISTRANO, CA 92675-2042 Laboratory Director: IRINA MARAMICA,MD,PHD,MBA, CLIA: 05D0643352
UL QUEST DIAGNOSTICS SACRAMENTO, 3714 NORTHGATE BLVD, SACRAMENTO, CA 95834-1617 Laboratory Director: LORNE L. HOLLAND, MD, CLIA: 05D0644209
Z4M CLEVELAND HEARTLAB INC, 6701 CARNEGIE AVENUE SUITE 500, CLEVELAND, OH 44103-4623 Laboratory Director: M. QASIM ANSARI, MD , CLIA: 36D1032987