

Title: Post Vasectomy Semen Analysis

Principle This procedure provides instructions for procedure to detect presence of spermatozoa in a post vasectomy semen analysis. Postoperative semen analysis should be done to evaluate the vasectomy operation. The examination should note presence of sperm and motility.

Scope This procedure is intended for Clinical Laboratory Scientists and laboratory staff.

Specimen sources

- Fresh, post vasectomy semen in a sterile container.

Specimen collection As directed by physician.

Specimen transport Specimens should be transported at room temperature and tested as soon as possible, within 1 hour of collection.

Specimen rejection

- Refrigerated or frozen specimens
- Mislabeled or unlabeled specimens

Reagents

| Description | Vendor | Storage |
|----------------------------|--------|------------------|
| Qwik Check Liquefaction | MES | Room temperature |

Continued on next page

Title: Post Vasectomy Semen Analysis, Continued

- Materials and supplies**
- Glass slide
 - Coverslip
 - Disposable pipette
 - Conical Centrifuge tube

- Equipment**
- Centrifuge
 - Microscope

Safety or Special Safety Precautions *Refer to the safety manual for general safety requirements.*

Procedure Follow the steps below to perform post vasectomy semen analysis

| Step | Action |
|------|---|
| 1 | <p>Allow the specimen to liquefy. Swirl semen in container to determine if coagulum has liquefied. A liquefied specimen will take the shape of the container.</p> <p>Note: Normal semen sample liquefies within 60 minutes at room temperature. Continuous gentle mixing or rotation of specimen during liquefaction may reduce errors in determining sperm concentration. Failure of specimen to liquefy within 30 minutes must be recorded in the report. When samples do not liquefy within 30 minutes, extend incubation time and pipette the specimen repeatedly with a sterile pipette. If this method fails, use of an enzymatic treatment- Qwik Check Liquefaction Kit may be used. Use of these manipulations must be recorded in the report. Refer to package insert for use.</p> <p><i>Note: Motility should not be reported on specimens tested more than 1 hour after collection.</i></p> |
| 2 | Mix the liquefied semen sample well. |
| 3 | Using a disposable pipette, place a drop of specimen on a slide. |
| 4 | Cover the drop on the slide with a coverslip. |
| 5 | Observe under high power magnification (40x), scan at least 20 fields. |
| 6 | Look for the presence of spermatozoa. |

Continued on next page

Title: Post Vasectomy Semen Analysis, Continued

| 7 | Note the number of spermatozoa / HPF and if they are motile. Also make note of any WBC's or RBC's present. | | | | | | | | |
|--|--|-------|---------|-----------------------|---|-------------------|--|--|---|
| 8 | If no sperm present, transfer semen sample to a conical centrifuge tube. | | | | | | | | |
| 9 | Spin the sample at 3000 RPM for 15 minutes. | | | | | | | | |
| 10 | Decant the supernatant. | | | | | | | | |
| 11 | Place a drop of sediment on a slide and place a coverslip over the specimen. | | | | | | | | |
| 12 | Examine 10 fields for spermatozoa. | | | | | | | | |
| 13 | Note the number of spermatozoa / HPF and if they are motile. Also make note of any WBC's or RBC's present. | | | | | | | | |
| 14 | Report in the Cerner using Accession Result Entry in Cerner the following: <table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th style="text-align: left;">If...</th> <th style="text-align: left;">Then...</th> </tr> </thead> <tbody> <tr> <td>No sperm are observed</td> <td> <ul style="list-style-type: none"> • Report 0 Sperm for Post Vas Count • No Sperm Seen for Motility. • Choose the drop down comment “Post Vas Count was confirmed by concentration technique.” </td> </tr> <tr> <td>Sperm are present</td> <td> <ul style="list-style-type: none"> • Enumerate the number/hpf for Post Vas Count: 0 - 3, 4 - 20, or >20 • Select Motile Sperm or Non-Motile for Motility. </td> </tr> <tr> <td>Sperm are present <u>and</u> specimen was tested more than 1 hour after collection</td> <td> <ul style="list-style-type: none"> • For Motility, choose the drop down comment: “Not performed >1hr after collection.” </td> </tr> </tbody> </table> <ul style="list-style-type: none"> • Enumerate any RBC's or WBC's, if present, as few, moderate or many in the comment field. • <i>Note: After centrifugation, motility can be lost. Do not report motility on centrifuged specimens. Motility should also not be reported on specimens tested more than 1 hour after collection.</i> | If... | Then... | No sperm are observed | <ul style="list-style-type: none"> • Report 0 Sperm for Post Vas Count • No Sperm Seen for Motility. • Choose the drop down comment “Post Vas Count was confirmed by concentration technique.” | Sperm are present | <ul style="list-style-type: none"> • Enumerate the number/hpf for Post Vas Count: 0 - 3, 4 - 20, or >20 • Select Motile Sperm or Non-Motile for Motility. | Sperm are present <u>and</u> specimen was tested more than 1 hour after collection | <ul style="list-style-type: none"> • For Motility, choose the drop down comment: “Not performed >1hr after collection.” |
| If... | Then... | | | | | | | | |
| No sperm are observed | <ul style="list-style-type: none"> • Report 0 Sperm for Post Vas Count • No Sperm Seen for Motility. • Choose the drop down comment “Post Vas Count was confirmed by concentration technique.” | | | | | | | | |
| Sperm are present | <ul style="list-style-type: none"> • Enumerate the number/hpf for Post Vas Count: 0 - 3, 4 - 20, or >20 • Select Motile Sperm or Non-Motile for Motility. | | | | | | | | |
| Sperm are present <u>and</u> specimen was tested more than 1 hour after collection | <ul style="list-style-type: none"> • For Motility, choose the drop down comment: “Not performed >1hr after collection.” | | | | | | | | |

Reference Range < 4 per HPF

Continued on next page

Title: **Post Vasectomy Semen Analysis**, Continued

Limitations

- Incomplete ejaculation and/or incomplete collection of total ejaculation may lead to inaccurate results.

Controlled Documents

The following controlled documents support this procedure.
SCPMG-PPP-0136 Managing the Semen Analysis-Patient Questionnaire Form

| Reference |
|---|
| World Health Organization, 2010, WHO laboratory manual for the Examination and Processing of human semen, 5 th edition |
| College of American Pathologists, 2019, Hematology and Coagulation Checklist |
| |

| Form |
|--|
| SCPMG-Form-0035 Semen Analysis – Patient Questionnaire |
| |
| |

Author

Robyn Kanemoto, MLS(ASCP)

Regional Parent Document Reference Number: SCPMG-PPP-0390 Rev: 01