# Milky Pleural Fluid

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## CASE DESCRIPTION

A 90-year-old man was admitted for progressive dyspnea. His medical history included hypertension and chronic myeloid leukemia diagnosed 10 years before and treated with dasatinib. Physical examination revealed pitting edema of the legs and dullness to percussion in the right chest. Laboratory test results were clinically relevant for white blood cells 7.7 × $10^9$/L (reference interval 4–10 × $10^9$/L), platelets 162 × $10^9$/L (150–400 × $10^9$/L), hemoglobin 10.5 g/dL (13–18 g/dL), total protein 7.1 g/dL (6.3– 8.1 g/dL), cholesterol 154 mg/dL (116–201 mg/dL) [3.99 mmol/L (3–5.2 mmol/L)], triglycerides 122 mg/dL (27–151 mg/dL) [1.38 mmol/L (0.3–1.71 mmol/L)], creatinine 192 $\mu$mol/L (45–90 $\mu$mol/L), and lactate dehydrogenase (LDH) activity 504 U/L (200–450 U/L). Chest radiograph showed a large right-sided pleural effusion; thoracentesis yielded milky pleural fluid with total protein 4.3 g/dL, LDH activity 291 U/L, cholesterol 66 mg/dL (1.7 mmol/L), and triglycerides 259 mg/dL (2.9 mmol/L). Bacterial cultures had no growth. After 12 h at 4 °C, the pleural fluid had a white ring at the top of the sample (Fig. 1).

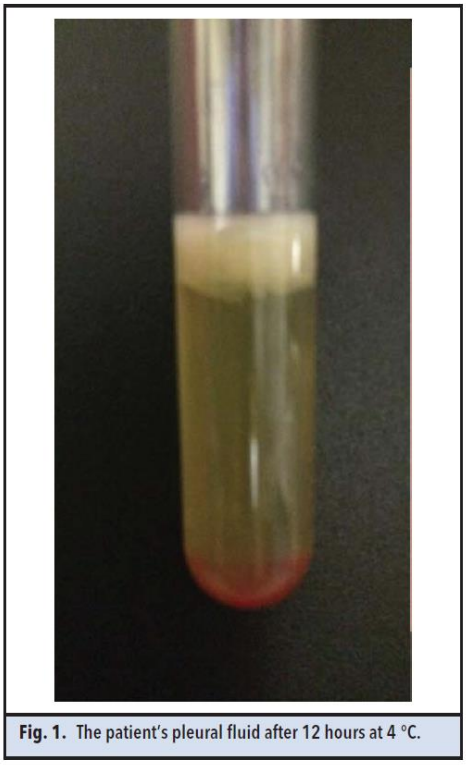

**Fig. 1.** The patient's pleural fluid after 12 hours at 4 °C.

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| QUESTIONS TO CONSIDER |
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| • What are the steps for evaluating pleural effusions? |
| • Which diagnosis should be considered in cases of milky pleural fluid? |
| • What is the main component of the white ring that appeared after 12 h at 4 °C? |

## Final Publication and Comments

The final published version with discussion and comments from the experts will appear in the February 2016 issue of *Clinical Chemistry*. To view the case and comments online, go to http://www.clinchem.org/content/vol62/issue2 and follow the link to the Clinical Case Study and Commentaries.

## Educational Centers

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