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| **Cholesterol, Body Fluid** |
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| **Cholesterol, Drain Fluid** |
| Clinical Indications | See Clinical Indications for individual source fluid types below |
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| Reference Interval and/or Interpretive Information | Drain fluid cholesterol should be interpreted in the context of source (e.g., pleural, peritoneal, etc.) and in correlation with serum results and/or other clinical evidence. |
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| **Pericardial Fluid Cholesterol** |
| Clinical Indications | Evaluation of cholesterol pericarditis |
| Supportive evidence for differentiation of exudates and transudates |
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| Reference Interval and/or Interpretive Information | Elevations in pericardial cholesterol are observed in cholesterol pericarditis. [1,2,3] |
| In a study of 30 patients undergoing elective open heart surgery (without evidence of pericardial disease), the “normal” pericardial fluid mean cholesterol value was 43 mg/dL (99% confidence interval, 29-58 mg/dL). [4] |
| This was also expressed as a “normal” mean fluid-to-serum cholesterol ratio of 0.3 (99% confidence interval, 0.2-0.4). [4] |
| Pericardial cholesterol may also be useful in the differentiation of exudates from transudates. [5] |
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| [4] Ben-Horin S, Shinfeld A, Kachel E, Chetrit A, Livneh A. 2005. The composition of normal pericardial fluid and its implications for diagnosing pericardial effusions. The American Journal of Medicine. 118:636-640. |
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| **Peritoneal/​Ascites Fluid Cholesterol** |
| Clinical Indications | Not well-defined |
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| Reference Interval and/or Interpretive Information | Studies have suggested that ascites fluid cholesterol (using a cutoff of 48 mg/dL) may provide supportive evidence when attempting to differentiate malignant from cirrhotic ascites. [1,2] |
| Such use, however, is limited by lack of specificity and is not recommended. [3,4] |
| The American Association for the Study of Liver Disease practice guideline, Management of Adult Patients with Ascites Due to Cirrhosis (Update 2012), lists ascitic fluid cholesterol as “unhelpful”. [5] |
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| [3] Runyon BA. 1986. Ascitic fluid “humoral tests of malignancy.” Hepatology. 6(6):1443-1445. |
| [4] Runyon BA. 1994. Editorial: Malignancy-related ascites and ascitic fluid “humoral tests of malignancy.” J Clin Gastroenterol.18(2):94-8 |
| [5] Runyon BA. 2012. Practice Guideline. Management of Adult Patients with Ascites Due to Cirrhosis: Update 2012. American Association for the Study of Liver Diseases. |
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| **Pleural Fluid Cholesterol** |
| Clinical Indications | Supportive evidence for differentiation of exudates and transudates |
| Differentiating chylothorax from pseudochylothorax |
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| Reference Interval and/or Interpretive Information | As supportive evidence to Light’s criteria, fluid cholesterol may provide additional evidence in differentiating exudates (>45 mg/dL) from transudates (≤45 mg/dL). [1,2,3] |
| This may also be expressed in terms of a pleural fluid-to-serum cholesterol ratio with ≥0.3 often associated with exudates and <0.3 often associated with transudates. [3,4] |
| Pleural fluid cholesterol can also be used along with triglycerides to help distinguish chylothorax (triglycerides >110 mg/dL, cholesterol <200 mg/dL) from pseudochylothorax (triglycerides <50 mg/dL, cholesterol >200 mg/dL). [5,6,7,8] |
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| [5] Hillerdal G. 1997. Chylothroax and pseudochylothroax. Eur Respir J. 10(5):1157-62.  |
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| https://www.aruplab.com/bodyfluids |