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| **Lipase, Body Fluid** |
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| **Biliary/​Hepatic Lipase** |
| Clinical Indications | Not well-defined |
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| Reference Interval and/or Interpretive Information | May provide supportive evidence for pancreatic origin of fluid collection when considered along with a corresponding serum specimen. |
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| **Lipase, Drain Fluid** |
| Clinical Indications | See Clinical Indications for individual source fluid types below |
| Supportive evidence for pancreatic source of fluid accumulation |
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| Reference Interval and/or Interpretive Information | Drain fluid lipase may provide supportive information as to pancreatic fluid source type if amylase levels are inconclusive, when considered along with a corresponding serum specimen. |
| Drain fluid amylase (as opposed to lipase) has been more extensively studied and included in recommendations for the evaluation of pancreatic fistula. [1] |
| In one retrospective study evaluating drain fluid after radical gastrectomy, fluid levels of both amylase and lipase were statistically higher in patients categorized as having complications associated with pancreatic leakage (versus those without complications). [2] |
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| References | [1] Bassi C, Dervenis C, Butturini G, Fingerhut A, Yeo C, Izbicki J, Neoptolemos J, Sarr M, Taverso W, Buchler M, for the International Study Group on Pancreatic Fistula. 2005. Postoperative pancreatic fistula: An international study group (ISGPF) definition. Surgery. 138(1):8-13.  |
| [2] Seo KW, Yoon KY, Lee SH, Shin YM, Choi KH, Hwang HY. 2011. Amylase, lipase, and volume of drainage fluid in gastrectomy for the early detection of complications caused by pancreatic leakage. J Korean Surg Soc. 81:402-407.  |
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| **Pancreatic Fluid Lipase** |
| Clinical Indications | Supportive evidence for pancreatic source of fluid accumulation |
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| Reference Interval and/or Interpretive Information | Fluid lipase may provide supportive information as to pancreatic fluid source type if amylase levels are inconclusive, when considered along with a corresponding serum specimen. |
| Pancreatic fluid amylase (as opposed to lipase) has been more extensively studied for the differentiation of pancreatic cyst versus pseudocyst. [1] |
| Drain fluid amylase (as opposed to lipase) has been more extensively studied and included in recommendations for the evaluation of pancreatic fistula. [1] |
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| References | [1] Bassi C, Dervenis C, Butturini G, Fingerhut A, Yeo C, Izbicki J, Neoptolemos J, Sarr M, Taverso W, Buchler M, for the International Study Group on Pancreatic Fistula. 2005. Postoperative pancreatic fistula: An international study group (ISGPF) definition. Surgery. 138(1):8-13.  |
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| **Pericardial Fluid Lipase** |
| Clinical Indications | Supportive evidence for pancreatic source of fluid accumulation |
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| Reference Interval and/or Interpretive Information | Limited published evidence. |
| May provide supportive evidence for pancreatic origin of fluid collection when considered along with a corresponding serum specimen. |
| Marked elevations of pericardial fluid lipase have been observed in a rare case of pancreatico-pericardial fistula.[1] |
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| References | [1] Sommer CA, Wilcox CM. 2014. Pancreatico-pericardial fistula as a complication of chronic pancreatitis. F1000Res. 3:31 |
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| **Peritoneal/​Ascites Fluid Lipase** |
| Clinical Indications | Evaluation of pancreatic ascites |
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| Reference Interval and/or Interpretive Information | Peritoneal fluid amylase (as opposed to lipase) has been more extensively studied and described in the evaluation of possible pancreatic ascites. [1] |
| There is insufficient evidence in the literature to support routine analysis of peritoneal fluid lipase activity. |
| May provide supportive evidence for pancreatic origin of fluid collections (if amylase levels are inconclusive), when considered along with a corresponding serum specimen. |
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| References | [1] Kjeldsberg CR, Straseski JA, Couturier MR, Cohen MB. Chapter 6: Peritoneal fluid. In Kjeldsberg’s Body Fluid Analysis. Hussong JW and Kjeldsberg CR, Eds. ASCP Press: Chicago, IL, 2015. ISBN: 978-089189-5824. |
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| **Pleural Fluid Lipase** |
| Clinical Indications | Evaluation of suspected pancreatic-pleural fistula |
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| Reference Interval and/or Interpretive Information | Pleural fluid amylase (as opposed to lipase) has been more extensively described, although it is usually not clinically indicated in routine pleural fluid analysis. [1,2] |
| Markedly elevated pleural fluid lipase (and amylase) have been observed with pancreatic-pleural fistula. [3] |
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| References | [1] Branca P, Rodriguez RM, Rogers JT, Ayo DS, Moyers JP, Light RW. 2001. Routine measurement of pleural fluid amylase is not indicated. Arch Intern Med. 161(2):228-232.  |
| [2] Kjeldsberg CR, Grenache DG, Couturier MR, Cohen MB. Chapter 5: Pleural and pericardial fluid. In Kjeldsberg’s Body Fluid Analysis. Hussong JW and Kjeldsberg CR, Eds. ASCP Press: Chicago, IL, 2015. ISBN: 978-089189-5824. |
| [3] Elkaoui H, Atoini F, Bouchentouf SM, El Omari F, Mahi M, Ait Ali A, Bounaim A, Sair K, Zentar A. 2012. Pancreatic-pleural fistula in chronic pancreatitis. Arab J Gastroenterol. 13(1):38-40. |
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| **Synovial Fluid Lipase** |
| Clinical Indications | Not well-defined |
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| Reference Interval and/or Interpretive Information | Lipase is not used in the routine analysis of synovial fluid. |
| There is limited published evidence regarding utility for measurement of synovial fluid lipase in cases of arthritis (with or without pancreatitis). |
| Elevations in synovial fluid lipase have been described in Pancreatitis-Panniculitis-Polyarthritis (PPP) syndrome, a rare disorder. [1,2] |
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| References | [1] Loverdos I, Swan MC, Shekherdimian S, Al-Rasheed AA, Schneider R, Fish JS, Ngan BY, Adeli K, Lowe ME, Singh CP, Sevilla WMA, Langer JC, Gonska T. 2015. A case of pancreatitis, panniculitis and polyarthritis syndrome: elucidating the pathophysiologic mechanisms of a rare disorder. J Ped Surg Case Reports. 3:223-226. |
| [2] Lin CF, Chiu YM. 2011. Pancreatitis, panniculitis, and polyarthritis syndrome presenting with gouty arthritis: a case report. Journal of Medical Cases. 2(3):110-112. |
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| https://www.aruplab.com/bodyfluids |