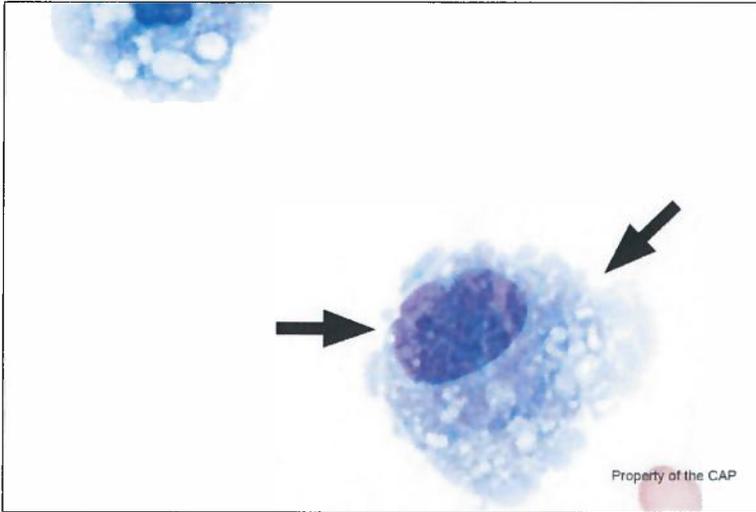


Body Fluid Photographs



(PERITONEAL, CYTOCENTRIFUGE, WRIGHT-GIEMSA, 100X)

Identification	CMP Referees		CMP Participants		Performance Evaluation
	No.	%	No.	%	
Monocyte/macrophage	43	72.9	2716	70.0	Non-consensus
Macrophage containing abundant uniform small lipid vacuoles/droplets (Lipophage)	7	11.9	772	19.9	
Mesothelial cell	8	13.6	306	7.9	
Plasma cell, normal/abnormal	-	-	21	0.5	
Immature or abnormal cell, would refer information for identification	1	1.7	23	0.6	

CMP-18

The arrowed cell is a monocyte/macrophage, as correctly identified by 70.0% of participants. Monocytes are bone marrow-derived cells that circulate in the blood. Macrophages arise from bone marrow-derived cells that migrate into tissues and evolve morphologically. Monocyte/macrophage morphology in fluids is quite variable, ranging from the typical monocyte of the peripheral blood to a vacuolated, activated stage with the morphology of a typical macrophage. Monocytes are usually large (12 to 20 μm) with abundant blue-gray cytoplasm and often contain sparse azurophilic granules. The nucleus is round to oval and may show indentation, giving it a kidney bean or horseshoe shape. The chromatin is lacy and small nucleoli may be apparent. Macrophages are larger cells (15 to 80 μm) with abundant cytoplasm showing evidence of active phagocytosis. This includes ingested material such as other blood cells or bacteria, hemosiderin, fungi, and/or remnants of digested materials as well as cytoplasmic vacuoles post ingestion. One or more round to oval nuclei are present and occasionally prominent nucleoli may be seen. Macrophages can at times be difficult to differentiate from mesothelial cells. Mesothelial cells are usually larger than monocytes/macrophages and usually show a biphasic staining cytoplasm with surface microvilli. The lack of biphasic staining helps exclude a mesothelial cell in the arrowed image. 19.9% of participants identified the arrowed cell as a macrophage containing abundant uniform small lipid vacuoles/droplets (ie, a lipophage). The lipophage must contain uniform, small lipid vacuoles, as stated in the description, that completely fill the cytoplasm. These fat-filled inclusions may originate from extracellular fatty material or from the membranes of ingested cells. Although the arrowed cell contains some cytoplasmic inclusions, they do not completely fill the cytoplasm, and they are not uniform in size.