

## Diagnostic approach to monoarticular arthritis – Synovial Fluid Analysis

	Normal	I. Osteoarthritis (degenerative)	II. RA, or other Inflammatory arthritis	III. Septic Arthritis	IV. Bloody Joint
<b>Gross Appearance</b>	Clear, colorless	Clear, straw colored	Opaque (turbid yellow)	Opaque (turbid yellow)	Bloody or sero-sanguinous
<b>Volume (mL)</b>	0-1	1-10	5-50	5-50	Variable
<b>Viscosity</b>	High	High	Low/fair	Low	Variable
<b>Total WBC Count (/mm<sup>3</sup>)</b>	<200	200-10,000	500-75,000	>50,000	200-10,000
<b>% PMNs</b>	<25	<50	>50	>75	>50

- 3 things to analyze in a joint's synovial fluid (3 C's): Cells, Crystals, Culture
- The higher the WBC count and % PMNs, the higher the chance of septic arthritis
- Viscosity ↓ with ↑ inflammation/PMN count b/c PMNs release enzymes that digest hyaluronan (the chemical in synovial fluid that makes it viscous)