




Correction to: Cellular senescence in the cholangiopathies: a driver of immunopathology and a novel therapeutic target

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In the original publication of the article, Table 1 was incorrect.

The correct Table 1 appears as below.

The original article has been corrected.

The original article can be found online at <https://doi.org/10.1007/s00281-022-00909-9>.

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Table 1 The immune cell profile and circulating cytokine signature associated with immunosenescence and the cholangiopathies biliary atresia, primary biliary cholangitis, and primary sclerosing cholangitis

Condition	Tissue immune cell profile <i>*also found in blood</i>	Circulating cytokine signature	Reference
<i>Immune-focused</i>			
Immunosenescence	<ul style="list-style-type: none"> • ↓ naïve CD8⁺ T cells* • ↑ memory CD8⁺ T cells • ↑ CD45RA⁺, CD28⁻, CD57^{high}, CD27⁻ T cells* • ↑ proinflammatory CD4⁺ T cells • ↑ CD56^{dim} NK cells* • ↑ B cells expressing TLR7, TLR9* • ↑ CD141⁺ dendritic cells* • Diminished neutrophil peroxidase production • Impaired basophil and eosinophil activity • Altered macrophage function 	GDF15, ACTIVIN A, TNFR1, CCL4, FAS, CCL3, TNF- α , IL-6, IL-8, IL-15, OPN, PAI1, PAI2, MPO	Reviewed in Borgoni, S. et al, <i>Ageing Res Rev</i> [25]
<i>Cholangiocyte-focused</i>			
Biliary atresia	<ul style="list-style-type: none"> • ↑ CD4⁺ and CD8⁺ T cells • ↑ B cells • ↑ Dendritic cells • ↑ NKT cells • ↑ Eosinophils • ↑ Neutrophils • ↑ Macrophages 	IL-2, INF- γ , IL-4, IL-10, IL-13, IL-18, TNF- α , soluble ICAM1	[38–45]
Primary biliary cholangitis	<ul style="list-style-type: none"> • ↑ CD4⁺ and CD8⁺ T cells • ↑ Dendritic cells • ↑ Macrophages • ↑ NK cells • ↑ MAIT cells 	IL-6, IL-8, IL-10, CCL4 (MIP-1 β), CCL19, CCL20, CXCL9, CXCL10, CXCL11, CXCL13, INF- α , INF- γ , CCL26 (Eotaxin-3), IL-12 p70, IL-1 β , IL-4, IL-5, IL-13	[51, 64–66]
Primary sclerosing cholangitis	<ul style="list-style-type: none"> • ↑ CD103⁺, CD69⁺, CD8⁺ memory T cells • ↑ CD4⁺ T cells • ↑ Macrophages • ↑ MAIT cells • ↑ Mast cells • ↑ Neutrophils 	IL-6, IL-8, CXCL9, CXCL10, IL-10, CCL4, CCL11 (Eotaxin-1), CCL26	[65, 75, 76]