



Our lab designated these particular cells as metamyelocytes, but due to the dense nuclear chromatin and abundance of the cells on the slide, the cells are properly classified as neutrophils with Pelger-Huët nuclei, as correctly identified by 28.9% of participants.

Neutrophils with abnormally unilobed or bilobed nuclei in the pince-nez conformation (two round nuclear lobes connected by a distinct thin filament) are designated as neutrophils with Pelger-Huët nuclei or as Pelger-Huët cells. They occur as an inherited autosomal dominant abnormality of nuclear segmentation referred to as Pelger-Huët anomaly. The nuclear chromatin in Pelger-Huët cells is generally denser than in normal cells. This feature helps to differentiate Pelger-Huët cells from band neutrophils and immature granulocytes such as myelocytes or metamyelocytes which may be seen in the context a granulocytic left-shift and show more open or lightly staining chromatin.

Neutrophils with identical nuclear features are occasionally observed in association with other clinical conditions, including myelodysplastic syndrome, infection and drug effect. The proportion of nuclei affected in these situations is variable but typically only a small subset of cells are affected, which is a clue since individuals with true Pelger-Huët anomaly usually demonstrate the morphologic abnormality in the **majority** of their neutrophils. When these cells are seen outside of the context of the congenital abnormality, they are usually referred to as neutrophils with dysplastic nuclei or pseudo-Pelger-Huët cells. However, for proficiency testing purposes, cells with pseudo-Pelger-Huët nuclei are best defined as Pelger-Huët cells.