71 years old female with a routine liquid base pap smear (ShurePath).

Review of the slide reveal cellular abnormalities compatible with Atrophic ASC-US.
What is **ATROPHIC ASC-US**?

Squamous atypia in postmenopausal cervical vaginal smears are only rarely associated with a biopsy proven squamous intraepithelial lesion (SIL), and thus most commonly represents an atrophy associated benign reactive change.

The term "atypia" in cervical smears has been used loosely for a wide variety of lesions ranging from inflammatory to preneoplastic. According to the Bethesda system, the term "atypia" should be used only for diagnostic categories designated as ASC-US and AGUS.

To distinguish atypical squamous cells of undetermined significance (ASC-US) and SIL from atrophy associated benign reactive changes only a few criteria are useful.

The general characteristics of ASC-atrophy are the **nuclear features**:

1. Nuclear hyperchromasia.
2. Nuclear contour irregularities.
3. Remember **nuclear enlargement** alone is not sufficient for diagnosis.

**TIP:** Generally, atrophic pap smear exhibit uniform nuclear enlargement in the squamous cell population, which, if we use the criteria of nuclear enlargement alone, it will make the majority of these atrophic cases to be classified as ASC-US.

**TIP:** Benign bare nuclei are common in atrophy resulting from autolysis of parabasal sheets. They may be enlarged if air dried but are distinguished from abnormal bare nuclei by their predictable normal structure and the presence of intact sheets with similar normal nuclei.

**TIP:** In atrophy, mainly in conventional pap, objects termed "blue blobs" may be seen which also resemble large abnormal bare nuclei. These degenerated parabasal cells have lost definition of their nucleus and have become densely cyanophilic. Some may show the shadow of their original parabasal cell nucleus. Transitional forms between blue blobs and degenerate parabasal cells are invariably present.

**TIP:** The ASC-US rates on cytology vary from 1.6 to 9%, an ASC-US rate greater than 5% might constitute misuse of ASC-US.