AMPATH LAB UPDATE

Bacterial Vaginosis Multiplex PCR

Bacterial vaginosis (BV) is a condition characterised by an alteration in vaginal flora and is one of the most common causes of vaginal discharge in women of reproductive age. Bacterial vaginosis is associated with an increased risk of contracting sexually transmitted infections, including HIV, the development of pelvic inflammatory disease, as well as poor reproductive outcomes, notably, preterm delivery. Timely diagnosis and treatment of BV is essential to avoid these complications.

Currently available diagnostic modalities such as Amsel's criteria and the Nugent score are subjective in nature and limited by both poor sensitivity and specificity for the diagnosis of bacterial vaginosis. Molecular testing is emerging as a sensitive and specific diagnostic tool for the diagnosis of bacterial vaginosis and may have particular utility in the setting of recurrent vaginitis/vaginosis. Ampath laboratories are introducing a new multiplex molecular assay for the diagnosis of bacterial vaginosis (Table 1).

The BV result is based on the ratio between the beneficial vaginal bacteria and BV-causing bacteria present in the specimen. The assay also detects *Candida* species and *Trichomonas vaginalis* as common causes of vaginosis/vaginitis.

Table 1: Bacterial vaginosis panel – test details

Test name	Organisms detected	Result reporting	Comments
Bacterial vaginosis	**Beneficial vaginal bacteria** • *Lactobacillus* species **BV-associated bacteria** • *Gardnerella vaginalis* • *Atopobium vaginae* BV-associated bacteria-2 • *Megasphaera-1*	Bacterial vaginosis • Positive • Negative	The result determines the ratio of beneficial vaginal bacteria to those associated with BV, similar to the Nugent score.
Candidiasis	• *Candida* group (includes *C. albicans, C. tropicalis, C. parapsilosis and C. dubliniensis*) • *C. glabrata* • *C. krusei*	*Candida* group • Positive • Negative *C. glabrata* • Positive • Negative *C. krusei* • Positive • Negative	*C. glabrata* and *C. krusei* are reported separately as these *Candida* species will most likely not respond to azole therapy. A positive *Candida* species result should only be treated in the presence of clinical vulvovaginal candidiasis.
T. vaginalis	• *T. vaginalis*	*T. vaginalis* • Positive • Negative	Improved sensitivity compared to microscopy.

Suitable sample types are dry vaginal swabs, which may be collected by the clinician or the patients themselves. High cervical swabs are unsuitable for the diagnosis of vaginitis/vaginosis. The turn-around time of the test is 24 to 48 hours.

Test mnemonic: BVPCR.