Infection with the bacterium *Treponema pallidum* (TP), which causes syphilis, is now the second most likely cause of genital ulceration.\(^1\)

This past decade has seen a major increase in syphilis infection rates, reaching levels not seen since the 1940’s.\(^2\)\(^3\)\(^4\)

Syphilis lesions can present atypically, be painful, and appear indistinguishable from herpes.\(^5\)\(^6\)\(^7\)

Dark-field microscopy is not suitable for oral or anal lesions, and is a skilled technique requiring experienced operators.\(^6\)\(^8\)

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**Syphilis on the rise**

**Serology is not a definitive diagnostic tool**

- **PCR**
  - direct detection method
  - definitive diagnostic
  - early detection for prompt partner notification

- **FTA-Abs**

- **TPHA**

- **VDRL/RPR**
  - treatment monitoring
  - requires confirmation
  - significant false negative rate

- **IgM**

- **Untreated**

- **Treated**

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**Primary Lesion**

**Secondary Lesion**

1. Serological windows and associated testing recommendations based on IUSTI and EU guidelines for management of syphilis.\(^6\)\(^8\)
2. Appearance of primary lesion is typically 3 weeks after infection (early as 10- and as late as 90- days), lasting 3-6 weeks.\(^3\)
3. Symptomology of secondary infections include mucous membrane lesions (appearing after primary lesions heal) in addition to skin rashes.\(^9\)
Genital/Oral Lesions

Diagnostic challenges

- Ulcerations or lesions in the ano-genital and oral regions can be caused by a variety of bacterial and viral infectious agents.\(^1,^{10}\)
- Symptomatic diagnosis of genital ulcers is often unreliable, with accuracy ranging from 33 to 80%.\(^{11-13}\)
- Herpes simplex viruses (HSV-1 & HSV-2) are the most prevalent causative agents, however reported syphilis cases are increasing, particularly in high-risk populations.\(^1-4,^{14-16}\)
- Nucleic acid amplification tests (NAATs) can improve accuracy of ano-genital ulcer diagnosis.\(^{1,6,8,10,17}\)

Treatment pathways differ significantly.
Accurate diagnostics will inform appropriate patient management and improve patient outcome.\(^6,^{10,18,19}\)

Syphilis infection rates increasing worldwide\(^2,^{23}\)

HSV-1 becoming more prevalent in genital infections\(^{20,21}\)

1-3 %
genital lesions may be atypical zoster (VZV) presentations\(^{18,22,23}\)

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**INFECTIONOUS AGENT**

- **HSV-1**
- **HSV-2**
- **TP**
- **VZV**

**TREATMENT**

- **Antiviral:**
  - HSV-1: Aciclovir/Famciclovir/Valaciclovir*
  - HSV-2: Aciclovir/Famciclovir/Valaciclovir*
  - VZV: Aciclovir

- **Antibiotics:**
  - Benzathine penicillin*

**PATIENT MANAGEMENT**

- **Counselling:**
  - HSV-1: genital Type-1 lower recurrence frequency
  - HSV-2: genital Type-2 has higher recurrence frequency
  - VZV: genital Type-1

- **Partner notification:**
  - Primary – past 90 days
  - Secondary – past 2 years

- **Patient notification:**
  - Potential pain-management for Zoster-related neuralgia

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Variations in patient management for different etiological agents of genital and oral lesions

* Based on IUSTI guidelines for management of HSV and Syphilis*

** Based on EU guidelines for the management of Herpes Zoster**

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