

Micro Matters



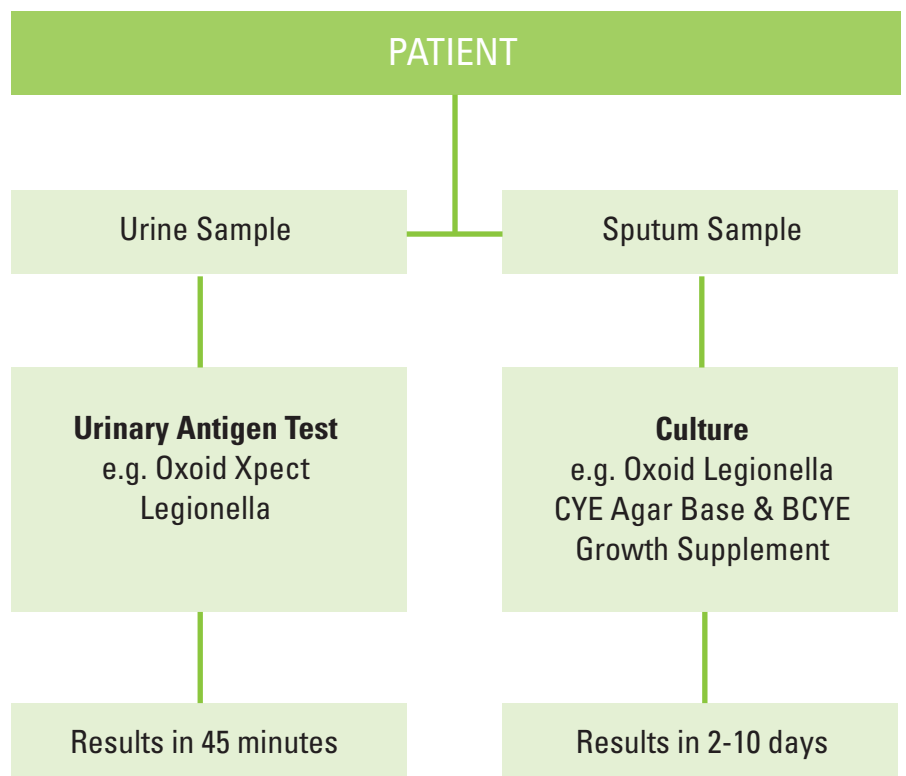
The Legionella season is approaching

With spring upon us and summer fast approaching, many people will be planning vacations at home, across Europe and overseas. That this time coincides with the peak Legionnaires' disease season is no coincidence, as the average temperature rises, waters become warmer and *Legionella* bacteria thrive. When a patient presents with severe pneumonia, *Legionella* must be suspected. For optimal outcomes and effective public health response, the infection and its source must be identified as quickly as possible. For this, rapid diagnosis of clinical *Legionella pneumophila* infection is essential.

Testing guidelines

In 2007-2008, the European Working Group for Legionella Infection (EWGLI) reported that 86.8% of cases of Legionnaires' disease were community acquired¹. Multiple national and thoracic society guidelines have been published, discussing in detail how to deal with patients presenting with community-acquired pneumonia: from clinical signs and symptoms, through diagnosis and treatment. The latest guidelines for microbiological diagnosis of *L. pneumophila* recommend a two pronged approach: urinary antigen testing and sputum culture^{2,3,4,5}.

Empirical use of antibiotics is associated with a substantially lower mortality rate than patients on inappropriate therapy (24% vs. 76%)⁶. Urinary antigen tests give rapid results within an hour of receipt of patient samples allowing immediate targeted treatment. This is fast becoming the accepted method of testing for *Legionella* with 81% of EWGLI collaborators using urinary antigen testing versus 8.8% using culture alone².





Xpect Legionella

- The only Legionella Urinary Antigen Test to detect *L. pneumophila* serogroups 1 and 6
- Results in just 45 minutes allow early appropriate patient therapy
- Simple, one-step procedure that is no more complicated than a home pregnancy test
- Room temperature storage means the tests can be used immediately straight from the box
- Excellent performance



How important is *L. pneumophila* serogroup 6?

It is widely accepted that *L. pneumophila* serogroup 1 is responsible for the majority of adult Legionella infections with serogroup 6 present in a smaller number of cases; together, both serogroups are responsible for two-thirds of all adult *L. pneumophila* infection⁷. The distribution of serogroups in the paediatric population is slightly different. In a review of paediatric patients, 48% of infections were caused by serogroup 1 and 33% by serogroup 6⁶. The Xpect Legionella urinary antigen test will detect both serogroup 1 and serogroup 6 *L. pneumophila*, allowing early appropriate treatment.

The evidence for Xpect Legionella: some useful references

Evaluation of the Oxoid Xpect Legionella Test Kit for Detection of Legionella in Urine Samples

B. Diederer, J. P. Bruin, E. P. F. Yzerman, Z. L. Xia, E. Scopes
Regional Laboratory of Public Health, Haarlem, Netherlands

"...the Oxoid Xpect Legionella test has comparable performance to alternative *Legionella* urinary antigen tests on the market..."

"...both the Xpect and alternative test are sensitive and specific for the detection of *L. pneumophila* serogroup 1 antigen from patient urine specimens."

"Both tests are rapid and can be used either as an alternative to traditional culture methods or an adjunct to existing diagnostic schemes."

Xpect Legionella Urinary Antigen Immunochromatographic Test: Rapid Diagnosis of Legionellosis

Alistair W. Brown, Diane Lindsay, E. Scopes
Scottish Legionella Reference Laboratory, Stobhill Hospital, Glasgow

"The Xpect Legionella urinary antigen ICT was shown to be a suitable alternative to either the BinaxNOW[®] urinary antigen ICT or the Biotest[®] urinary antigen EIA for detecting *L. pneumophila* in urine samples."

"It has proved highly effective at detecting the two most common pneumonia-causing species of *L. pneumophila*, serogroups 1 and 6, a unique feature of this urinary antigen immunochromatographic test."

References 1. Joseph, C.A., Ricketts, K.D. (2010) On behalf of the European Working Group for *Legionella* Infections. Legionnaires' disease in Europe 2007–2008. *Euro. Surveill.* **15**(8)
2. British Thoracic Society. (2009) B.T.S. Guidelines for the management of community acquired pneumonia in adults: update 2009. THORAX, Volume 64 Issue Suppl. III, October 2009.
3. European Respiratory Society in collaboration with ESCMID. (2005) Guidelines for the management of adult lower respiratory tract infections. *Eur. Respir. J.* **26**:1138-1180
4. Infectious Disease Society of America & American Thoracic Society. (2007) IDSA/ATS Guidelines for CAP in Adults. *C.I.D.* **44** (Suppl 2). S27.
5. EWGLI. (2005) European Guidelines for Control and Prevention of Travel Associated Legionnaires' disease. January 2005 www.ewgli.org
6. Greenberg, D. et al. (2006) Problem pathogens: paediatric Legionellosis – implications for improved diagnosis. *Lancet Infect. Dis.* **6**:529-35
7. Yu, V. L. et al. (2002) Distribution of *Legionella* Species and Serogroups Isolated by Culture in Patients with Sporadic Community-Acquired Legionellosis: An International Collaborative Survey. *J. Infect. Dis.* **186**:127-8.



DEDICATED TO MICROBIOLOGY

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