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## Infographic: The EBJIS definition of periprosthetic joint infection

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## ■ INFOGRAPHIC

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## A PRACTICAL GUIDE FOR CLINICIANS

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Periprosthetic joint infection (PJI) remains a major concern for surgeons and patients. It presents a large burden for healthcare systems, requiring expensive, invasive treatments, which are not always successful.<sup>1,2</sup> Effective treatment starts with accurate diagnosis.

Previous definitions of PJI have been helpful and provided reference standards for diagnostic studies,<sup>3-5</sup> but no single definition has been adopted.<sup>6</sup> The European Bone & Joint Infection Society (EBJIS) has therefore worked with the Musculoskeletal Infection Society (MSIS) and the European Society of Clinical Microbiology and Infectious Diseases (ESCMID) Study Group for Implant-Associated Infections (ESGIAI) to produce a new definition, derived from the most robust evidence on diagnosis of PJI. This fulfils the two primary roles of a definition. Firstly, it provides a practical guide for clinicians to decide if an infection is present or not, based on widely available investigations. Secondly, it facilitates researchers to perform studies in patients with confirmed infection or not.

The elements of the definition were chosen on the specificity or sensitivity of each test. Unfortunately, we do not have any perfect tests, and currently we have no tests which can reliably exclude infection. A test with a high specificity (such as histology) is only positive in those with infection and so can be used to confirm the presence of infection. Sensitive tests can suggest the presence of infection but will not confirm it unless they also have high specificity. As new tests are evaluated, they can be added.

The novel 'traffic light' approach divides patients by the likelihood of infection (green or amber) or confirmed infection (red). It recognizes the difficulty of trying to create a simplistic 'black or white' definition of PJI.<sup>6,7</sup> This mirrors the approach in the recent Consensus Definition of Fracture-Related Infection.<sup>8,9</sup>

We hope that this work helps clinicians of all expertise and allows informed discussions with patients about the diagnosis of PJI. The definition is now undergoing validation trials and we welcome further work on this.

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