

Surveillance proposal consultation document

2018 surveillance of Neutropenic sepsis: prevention and management in people with cancer (NICE guideline CG151)

Surveillance proposal

We propose to not update the NICE guideline on [neutropenic sepsis](#).

Reasons for the proposal to not update the guideline

No new evidence was identified which suggested NICE guideline CG151 should be updated. We did not identify any new evidence that would change or invalidate the current recommendations.

Overview of 2018 surveillance methods

NICE's surveillance team checked whether recommendations in [neutropenic sepsis](#) (NICE guideline CG151) remain up to date. The 2018 surveillance followed the static list review process, consisting of:

- A search for new or updated Cochrane reviews and national policy
- A search for ongoing research
- Examining related NICE guidance and quality standards and NIHR signals
- Feedback from topic experts via a questionnaire
- Consulting on the proposal with stakeholders (this document).

For further details about the process and the possible update decisions that are available, see [ensuring that published guidelines are current and accurate](#) in developing NICE guidelines: the manual.

Evidence considered in surveillance

Cochrane reviews

We searched for new Cochrane reviews related to the whole guideline. We found 13 relevant Cochrane reviews published between November 2011 and September 2018.

Antibiotic prophylaxis

The use of fluoroquinolones for the prophylaxis of neutropenic sepsis is advised in recommendations 1.2.1.1 and 1.2.1.2 in CG151. One review ([Gafer-Gvili et al. 2012](#)) is an update to a Cochrane review first published in 2005 which was also included as evidence during the development of these recommendations. The results of the updated review found significant reductions in mortality with quinolone prophylaxis which continues to support current recommendations in the guideline.

Recommendation 1.2.1.3 states that granulocyte-colony stimulating factor (G-CSF) should not be routinely offered for the prevention of neutropenic sepsis in adults receiving chemotherapy. Two reviews ([Renner et al. 2012](#) and [Estcourt et al. 2015](#)) found prophylactic colony-stimulating factors (CSFs) reduced febrile neutropenia in patients undergoing chemotherapy. Although these reviews do not support recommendation 1.2.1.3, the quality of the included trials was deemed by the Cochrane review authors to be very low and further evidence is required to confirm the results.

Recommendation 1.2.1.3 is supported by a review ([Estcourt et al. 2016](#)) that suggests there is insufficient evidence to determine whether granulocyte transfusions affect all-cause mortality in people who are neutropenic. It is also supported by a review ([Mhaskar et al. 2014](#)) which concluded that it is unclear whether a combination of CSF and antibiotics reduce the rate of infection-related mortality in people with chemotherapy induced febrile neutropenia. Two further reviews ([Skoetz et al. 2015](#) and [Hutzschenreuter et al. 2016](#)) concluded that there was a lack of data to inform the use of G-CSF in people receiving chemotherapy.

Initial antibiotic therapy

Recommendation 1.4.3.1 advises to offer beta lactam monotherapy as initial empiric antibiotic therapy and recommendation 1.4.3.2 advises not to offer aminoglycoside to patients with suspected neutropenic sepsis. In support of these recommendations, 1 review ([Paul et al. 2013](#)) found significantly lower rates of mortality, adverse events and super-infections following the use of beta lactam monotherapy compared to combination therapy with aminoglycoside.

Glycopeptide antibiotics

Recommendation 1.4.3.3 advises not to offer empiric glycopeptide antibiotics to patients with suspected neutropenic sepsis who have central venous access devices. This recommendation is supported by a review ([Beyar-Katz et al. 2017](#)) which found no benefit of additional antibiotic treatment with glycopeptides and a further review ([van de Wetering et al. 2013](#)) found no benefit of antibiotics administered prior to the insertion of a catheter.

Switch to oral antibiotics

Recommendation 1.5.3.3 advises to switch from intravenous to oral antibiotic therapy after 48 hours in patients whose risk of developing septic complications has been reassessed as

low. This is supported by 1 review ([Vidal et al. 2013](#)) which found no significant differences in mortality and treatment failure rates between intravenous and oral treatment for febrile neutropenia.

Hospital discharge

Recommendation 1.5.3.4 advises on the use of a scoring system and clinical judgement to determine low risk for discharge from hospital. One review ([Loeffen et al. 2016](#)) concluded that there is no evidence to suggest that early discharge from hospital is less safe in children with febrile neutropenia at low risk of bacterial infections. However, the recommendation is unlikely to be impacted as the review does not specify any criteria for determining low risk.

Diet

One review ([van Dalen et al. 2016](#)) examined the use of low bacterial diets for the prevention of cancer chemotherapy related neutropenia. This was an update to a previous review which concluded that there was no evidence to suggest that a low bacterial diet prevented infections. No new studies were identified in the updated review and no definitive conclusions could be reached by the Cochrane authors. There are currently no recommendations in CG151 on diet and this is unlikely to change considering the lack of any conclusive evidence in this area.

Ongoing research

We checked for relevant ongoing research; of the ongoing studies identified, 1 study was assessed as having the potential to change recommendations. As the study is planned to complete in May 2019, we plan to check the publication status regularly and evaluate the impact of the results on current recommendations as quickly as possible. This study relates to recommendation 1.5.3.3 regarding switching to oral antibiotics for low risk groups:

- [Early switch to oral antibiotics in patients with low risk neutropenic sepsis](#)

Intelligence gathered during surveillance

Views of topic experts

We considered the views of topic experts, including those who helped to develop the guideline. For this surveillance review, topic experts completed a questionnaire about developments in evidence, policy and services related to NICE guideline CG151.

There were 2 responses (out of 9 questionnaires sent) from topic experts who both stated that the guideline does not require updating. No comments or reasons were provided for their decision to not update.

Antibiotics

One topic expert highlighted concerns regarding the accuracy of antibiotic guidance, however, no supporting evidence was provided and evidence found during the surveillance review generally supports current recommendations.

Age groups

One topic expert highlighted concerns regarding the applicability of recommendations to different age groups, specifically older age and children. However, no supporting evidence was provided and no new evidence was found during the surveillance review.

Rapid diagnosis

One topic expert suggested that the surveillance review should focus on rapid diagnosis and direct access oncology pathways. However, we did not find any new evidence in these areas during the surveillance review.

Outpatient treatment

Topic experts highlighted 1 study ([Taplitz et al. 2018](#)) for consideration. This is a clinical practice guideline from the US which focusses on outpatient treatment of fever and neutropenia in adults. The clinical practice guideline includes evidence that supports recommendation 1.5.2.1 on the provision of outpatient care for this population. Generally, it also suggests that CG151 is in line with current international practice in this area.

Views of stakeholders

Stakeholders are consulted on all surveillance proposals except if the whole guideline will be updated and replaced. Because this surveillance proposal is to not update the guideline, we are consulting with stakeholders.

See [ensuring that published guidelines are current and accurate](#) in developing NICE guidelines: the manual for more details on our consultation processes.

Equalities

No equalities issues were identified during the surveillance process.

Editorial amendments

No editorial amendments are needed.

Overall surveillance proposal

After considering all evidence and other intelligence and the impact on current recommendations, we proposed that no update is necessary.

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