Fibroids in infertility

This statement has been developed and reviewed jointly by the Women’s Health Committee and the Australasian CREI Consensus Expert Panel on Trial evidence (ACCEPT) group. The statement has been approved by the RANZCOG Board and Council.

A list of Women’s Health Committee Members can be found in Appendix A.

Disclosure statements have been received from all members of this committee.

Disclaimer This information is intended to provide general advice to practitioners. This information should not be relied on as a substitute for proper assessment with respect to the particular circumstances of each case and the needs of any patient. This document reflects emerging clinical and scientific advances as of the date issued and is subject to change. The document has been prepared having regard to general circumstances.

First endorsed by RANZCOG: March 2011
Current: November 2014
Review due: November 2017

Consensus statement of the Royal Australian & New Zealand College of Obstetricians & Gynaecologists (RANZCOG) and the Australasian CREI Consensus Expert Panel on Trial evidence (ACCEPT) group.

Objectives: To provide practice guidance on the assessment and management of fibroids in infertility.

Target audience: All health practitioners providing gynaecological care and patients.

Values: The evidence was reviewed by the Women’s Health Committee (RANZCOG), and applied to local factors relating to Australia and New Zealand.

Background: This statement was first developed by Women’s Health Committee in March 2011 and reviewed in November 2014.

Funding: The development and review of this statement was funded by RANZCOG.
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1. Patient summary
A fibroid (leiomyoma) is a benign growth of muscle in the uterus (womb). These growths may occur on the outside (subserosal fibroid), in the substance (intramural) or in the cavity (submucosal) of the uterus. Some fibroids have an effect on the ability to fall pregnant. This statement provides guidance for specialists in the assessment and management of fibroids for women who are wishing to fall pregnant.

2. Introduction
The effect of fibroids on fertility is poorly understood and the most appropriate management remains controversial. The effect on fertility is likely to be related to the fibroid size, position subserosal (SS), intramural (IM) or subserosal (SM) and number.

3. Discussion and recommendations
3.1 How should uterine fibroids be evaluated?
Fibroid position appears to influence fertility, therefore imaging techniques must be able to exclude uterine cavity involvement by the fibroid. Hysterosalpingography and transvaginal ultrasound are insufficiently sensitive or specific.

The optimal imaging techniques for excluding cavity involvement by fibroids are either MRI, sonohysterography or hysteroscopy, though hysteroscopic assessment with hysteroscopy may at times under-represent submucosal (SM) lesions because of raised intrauterine pressure causing temporary regression of the fibroid contour.

3.2 What is the effect of fibroid position on fertility outcomes and the effect of myomectomy?
Fertility outcomes have been reported in both spontaneous and assisted conception, though the majority of studies consider outcomes in in vitro fertilisation (IVF).

SS fibroids do not appear to have a significant effect on fertility outcomes. IM fibroids may be associated with reduced fertility and an increased miscarriage rate.

However, there is insufficient evidence to determine whether myomectomy for IM Fibroids improves fertility outcomes.

SM fibroids are associated with reduced fertility and an increased miscarriage rate.

Hysteroscopic myomectomy for SM fibroids is likely to improve fertility outcomes, however, the quality of the included studies is poor and that further research is required.

The relative effect of multiple or different sized fibroids on fertility outcomes are uncertain and further research is required.

3.3 What are the indications for myomectomy in infertile women?
Fibroid size, number and location within the uterus may impact on the utility of myomectomy, and this will need to be considered in the management plan for an individual patient. The indications for myomectomy in infertile women may be summarized as follows:
- Infertile women who have demonstrated SM fibroid(s).
- Infertile women with symptomatic fibroid(s), such as heavy vaginal bleeding or pressure symptoms, even though trial evidence does not show clear fertility benefit, the presence of symptoms may justify the intervention.
- Couples presenting with multiple failed cycles of Assisted Reproductive Technology (ART) where the female partner has IM fibroids.
3.4 What are alternative surgical treatment methods of fibroids in women desiring future fertility?
Myomectomy is the accepted surgical management for fibroids that are felt to influence fertility.
Newer surgical approaches such as temporary or permanent uterine artery ligation should only be used in the setting of clinical trials.

3.5 What are other treatments for the management of fibroids in women desiring future fertility?
Uterine artery embolisation (UAE), magnetic resonance guided focused ultrasound surgery (MRgFUS), myolysis and radio-frequency ablation (RFA) should only be used in the setting of approved clinical trials on the management of fibroids in women with infertility.

3.6 What is the recommended medical management of fibroids in women desiring future fertility?
Medical management of fibroids delays efforts to conceive and is not recommended for the management of infertility associated with fibroids. However, short term GnRH analog use in infertile women with fibroids can be useful for pre-operative correction of anaemia or short term reduction in fibroid volume.

4. Other suggested reading

5. Links to other College statements
C-Gyn 23) Uterine Artery Embolisation for the treatment of Uterine Fibroids
(C-Gen 15) Evidence-based Medicine, Obstetrics and Gynaecology

6. Patient information
A range of RANZCOG Patient Information Pamphlets can be ordered via:
https://www.ranzcog.edu.au/Womens-Health/Patient-Information-Guides/Patient-Information-Pamphlets
Appendices

Appendix A Women’s Health Committee Membership

<table>
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<tr>
<th>Name</th>
<th>Position on Committee</th>
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<tr>
<td>Associate Professor Stephen Robson</td>
<td>Chair</td>
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<td>Professor Susan Walker</td>
<td>Deputy Chair - Obstetrics</td>
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<td>Dr Gino Pecoraro</td>
<td>Deputy Chair - Gynaecology</td>
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<td>Professor Yee Leung</td>
<td>Member</td>
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<td>Associate Professor Anuschirawan Yazdani</td>
<td>Member</td>
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<td>Dr Simon Craig</td>
<td>Member</td>
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<td>Associate Professor Paul Duggan</td>
<td>Member</td>
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<td>Dr Vijay Roach</td>
<td>Member</td>
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<td>Dr Stephen Lyons</td>
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<td>Dr Ian Page</td>
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<td>Dr Donald Clark</td>
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<td>Dr Amber Moore</td>
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<td>Dr Martin Ritossa</td>
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<td>Dr Benjamin Bopp</td>
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<td>Dr James Harvey</td>
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<td>Dr John Tait</td>
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<td>Dr Anthony Frumar</td>
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<td>Dr Kirsten Black</td>
<td>Member</td>
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<td>Dr Jacqueline Boyle</td>
<td>Chair of IWHC</td>
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<tr>
<td>Dr Louise Sterling</td>
<td>GPOAC representative</td>
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<tr>
<td>Ms Catherine Whitby</td>
<td>Council Consumer representative</td>
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<td>Ms Susan Hughes</td>
<td>Consumer representative</td>
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<td>Ms Sherryn Elworthy</td>
<td>Midwifery representative</td>
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<tr>
<td>Dr Kathryn van Harselaar</td>
<td>Trainee representative</td>
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<tr>
<td>Dr Agnes Wilson</td>
<td>RANZCOG Guideline developer</td>
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Appendix B Overview of the development and review process for this statement

i. **Steps in developing and updating this statement**

This statement was originally developed in March 2011 and was most recently reviewed in November 2014. The Women’s Health Committee carried out the following steps in reviewing this statement:

- Declarations of interest were sought from all members prior to reviewing this statement.
- Structured clinical questions were developed and agreed upon.
- An updated literature search to answer the clinical questions was undertaken.
- At the July 2014 face-to-face committee meeting and the October 2014 teleconference, the existing consensus-based recommendations were reviewed and updated (where appropriate) based on the available body of evidence and clinical expertise.

ii. **Declaration of interest process and management**

Declaring interests is essential in order to prevent any potential conflict between the private interests of members, and their duties as part of the Women’s Health Committee.

A declaration of interest form specific to guidelines and statements was developed by RANZCOG and approved by the RANZCOG Board in September 2012. The Women’s Health Committee members...
were required to declare their relevant interests in writing on this form prior to participating in the review of this statement.

Members were required to update their information as soon as they became aware of any changes to their interests and there was also a standing agenda item at each meeting where declarations of interest were called for and recorded as part of the meeting minutes.

There were no significant real or perceived conflicts of interest that required management during the process of updating this statement.

Appendix C Full Disclaimer
This information is intended to provide general advice to practitioners, and should not be relied on as a substitute for proper assessment with respect to the particular circumstances of each case and the needs of any patient.

This information has been prepared having regard to general circumstances. It is the responsibility of each practitioner to have regard to the particular circumstances of each case. Clinical management should be responsive to the needs of the individual patient and the particular circumstances of each case.

This information has been prepared having regard to the information available at the time of its preparation, and each practitioner should have regard to relevant information, research or material which may have been published or become available subsequently.

Whilst the College endeavours to ensure that information is accurate and current at the time of preparation, it takes no responsibility for matters arising from changed circumstances or information or material that may have become subsequently available.