

For the Primer, visit [doi:10.1038/nrdp.2016.43](https://doi.org/10.1038/nrdp.2016.43)

→ Uterine fibroids are benign neoplasms of the uterus that are a major source of morbidity in women of reproductive age. Symptoms include heavy or prolonged menstrual bleeding, as well as pain and urinary and gastrointestinal problems.

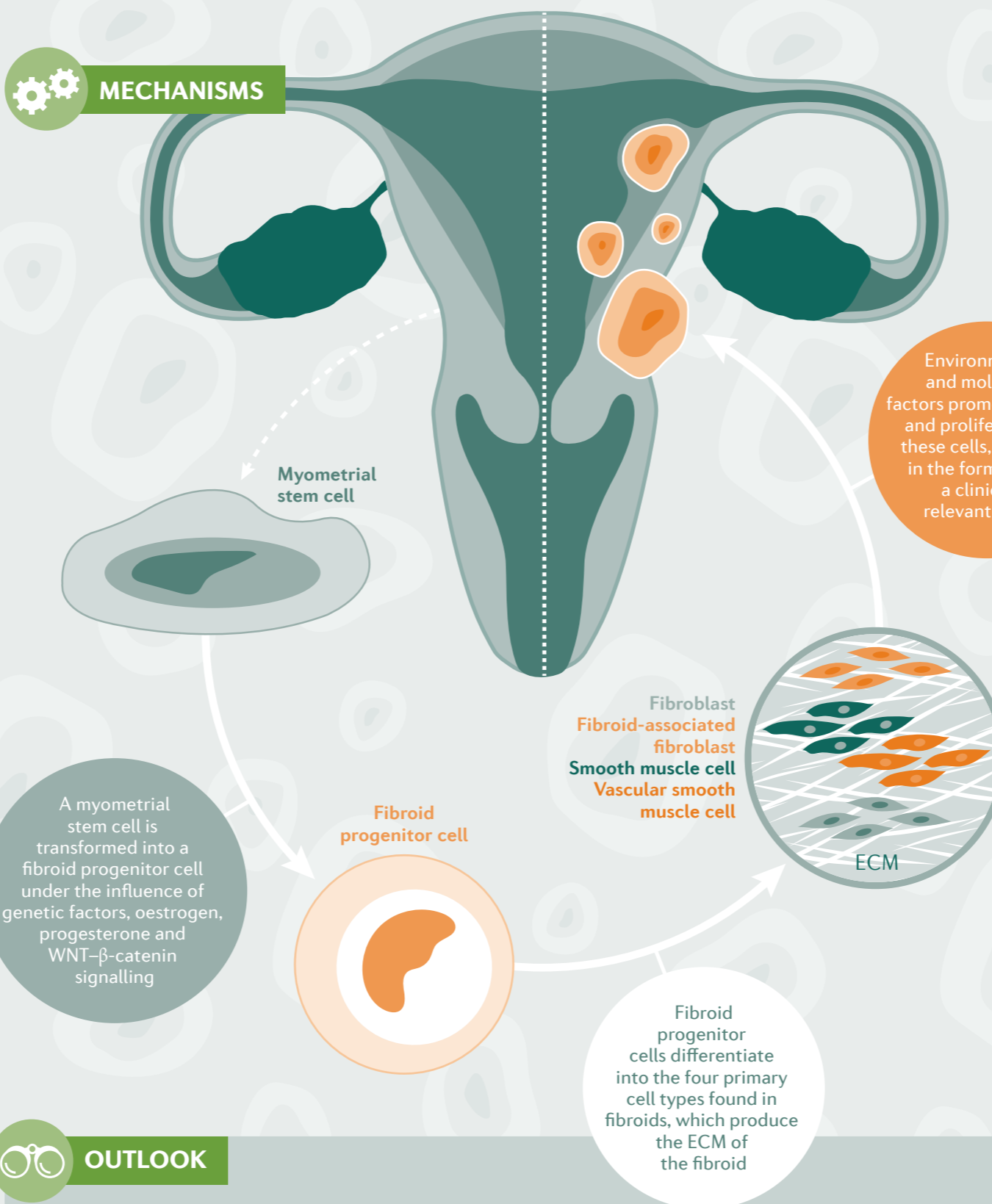
EPIDEMIOLOGY

Uterine fibroids occur in >70% of women but are often asymptomatic, with clinical symptoms reported in 25–50% of cases. The most important risk factors for developing fibroids are age and race. The incidence of fibroids is 2–3-times greater in black women than in white women and black women generally present with larger and more numerous fibroids. Secondary risk factors include diet and alcohol consumption, parity, vitamin D deficiency and a history of sexually transmitted infections.

DIAGNOSIS

Diagnosis of uterine fibroids is complicated by the diversity in the size and location of fibroids, in addition to the wide range of symptoms associated with this disease. Transvaginal ultrasonography (with or without sonohysterography) is commonly used to diagnose fibroids, but other imaging techniques, including hysterosalpingography and MRI, are used to confirm diagnosis in a small subset of patients.

MECHANISMS



OUTLOOK

Fibroid research is moving towards trying to elucidate factors that will enable the accurate assessment of prognosis and the development of individualized therapies. In addition, improved understanding of the molecular mechanisms that underlie the growth acceleration phase of fibroid development could lead to the production of novel treatments that induce growth inhibition or regression.

Rx MANAGEMENT

The type and severity of symptoms dictate the treatment for women with fibroids, as do the reproductive considerations of the patient. Heavy menstrual bleeding can be managed with, for example, a levonorgestrel intrauterine device, antifibrinolytic drugs, myomectomy (excision of the fibroids) or endometrial ablation. Fibroids associated with bulk symptoms can be managed by progesterone receptor modulators or surgery, such as myomectomy, hysterectomy or uterine artery embolization.

! **Hysterectomy is the most common treatment for uterine fibroids, accounting for 75% of all fibroid treatments in the United States**

QUALITY OF LIFE

Atypical or cellular fibroids can evolve into uterine sarcomas in a rare subset of women

Few studies have examined how the symptoms of uterine fibroids influence quality of life. However, fibroids have been shown to affect the work and social lives of women and have a disproportionate effect on black women compared with white women.

Fibroids have also been reported to contribute to infertility and adverse pregnancy outcomes. In women who desire future pregnancy, the main treatment for fibroids is myomectomy, but whether this procedure can improve pregnancy outcomes is disputed.