Cost-effectiveness Analysis for Treatment of Symptomatic Uterine Fibroids Among Premenopausal Women Seeking to Retain Their Uterus

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ABSTRACT
Objectives: To determine the cost-effectiveness of different treatment options and ordinal number of treatments for symptomatic uterine fibroids in women who wish to retain their uterus.

Methods: A Markov model was used to simulate different treatment options, as well as to determine the optimal number of treatment options for premenopausal women seeking to retain their uterine fibroids who prefer to retain their uterus (Figure 1).

Results: One-time use of GnRH followed by myomectomy for women whose symptoms recurred was more costly and more effective than watchful waiting or treating symptomatic fibroids with GnRH only, up to 3 myomectomies for women whose symptoms recurred. Treatment strategies including one-time use of GnRH led to increased medical costs and increased QALYs gained. For women of all ages, initial treatment with one-time use of GnRH was dominant compared with strategies containing myomectomy only. For women whose symptoms recurred, each additional intervention was associated with low cost and effectiveness compared with women treated with one-time use of GnRH.

Conclusions: Treatment strategies including one-time use of GnRH led to better health outcomes and lower costs (i.e., dominant) compared with strategies containing myomectomy only, because of the additional interventions required for women whose symptoms recurred.

Keywords: Uterine fibroids; Cost-effectiveness analysis; Treatment; Women seeking to retain uterus

RESULTS
Table 1. Results of the Base-Case Analysis

Table 2. Baseline Probabilities

Table 3. Costs (2007 USD)

Table 4. Sensitivity Analyses

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REFERENCES

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Aetna considers the following treatments for uterine fibroids experimental and investigational because their safety and effectiveness have not been established: Acupuncture. Cryomyolysis. In a review of treatment of uterine fibroids, Van Voorhis (2009) stated that although early outcomes of up to 1 year are encouraging, long-term effectiveness and comparative studies are needed before focused ultrasound can be recommended for the treatment of uterine fibroids. Mindjuk et al (2015) reported on the 12-month technical and clinical results of MRgFUS treatment and factors affecting clinical treatment success. The repertoire of uterus-preserving treatments for symptomatic fibroids has increased in recent years. Just over 20 years ago, the use of uterine artery embolization (UAE) was first reported [7]. The National Institute for Health and Clinical Excellence (NICE) has reviewed its efficacy and recommends UAE as an alternative treatment to hysterectomy and myomectomy [8]. Magnetic resonance (MR)-guided focused ultrasound (MRgFUS) [9] is another new technique, but its adoption has been slow, partly due to the. As fibroids present in a wide range of sizes and locations with variety of symptoms, and patients may wish to have a selection of treatments; we believe that there simply is no single ideal treatment. Uterine Fibroids - Etiology, pathophysiology, symptoms, signs, diagnosis & prognosis from the MSD Manuals - Medical Professional Version. Treatment of symptomatic patients depends on the patient’s desire for fertility and her desire to keep her uterus. Treatment may include oral contraceptives, brief presurgical gonadotropin-releasing hormone therapy to shrink fibroids, progestin therapy, and more definitive surgical procedures (eg, hysterectomy, myomectomy). Uterine fibroids are the most common pelvic tumor, occurring in about 70% of women by age 45. Fibroids are more common among women who have a high body mass index. Potentially protective factors include parturition and cigarette smoking. Most fibroids in the uterus are.