

Hysteroscopic removal of uterine fibroids and infertility treatment: Reimbursement in Germany

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OBJECTIVE:

- Fibroids are the most benign tumor of the female genital tract and are usually diagnosed in the reproductive age. Therefore, they represent possible complications in the implementation of an acute desire to have children. (1)
- The main therapeutic options are minimally invasive surgical procedures or drug treatment due to the desire for a subsequent pregnancy (1). This study focuses on the minimally invasive surgical procedure of hysteroscopy.
- The study objective was to examine epidemiology of fibroids in Germany, the treatment option of operative hysteroscopy, subsequent assisted reproduction technology (ART) treatments and their reimbursement within the German health care system.

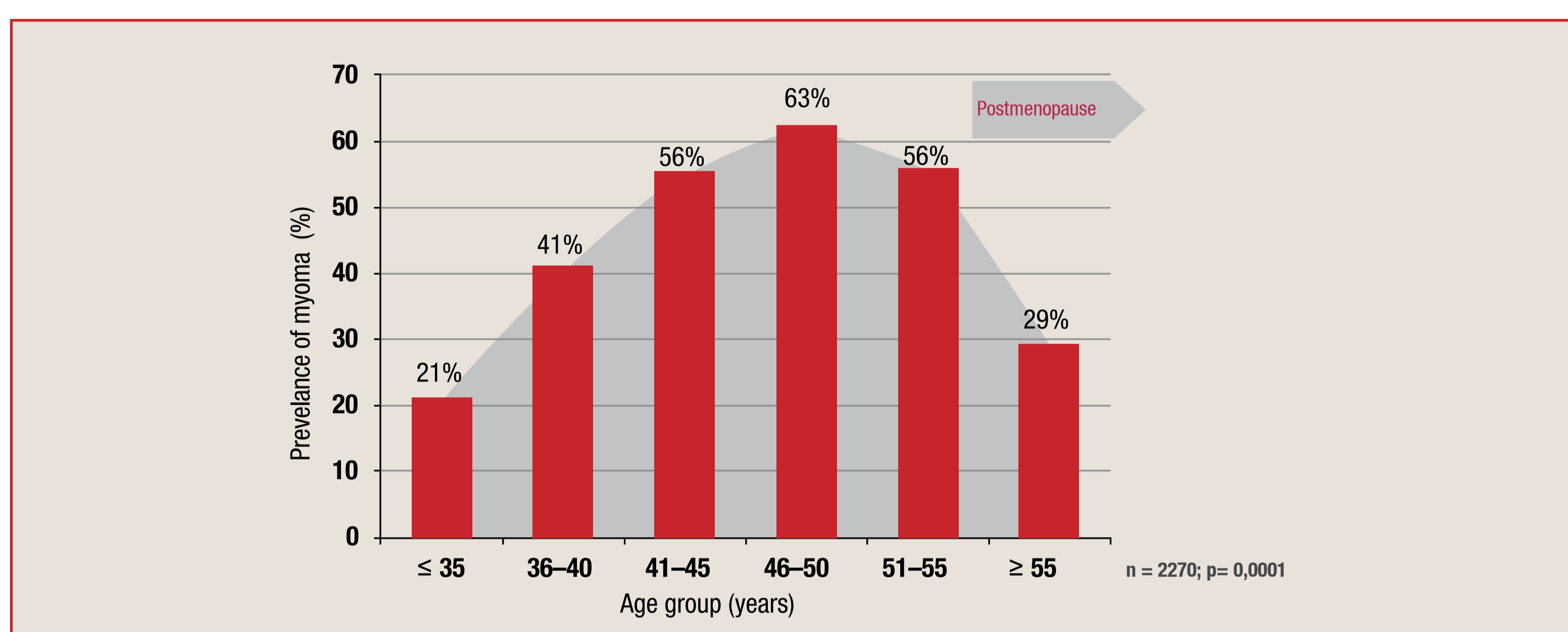
METHODS:

- Data was retrieved by conducting a targeted literature search.
- Additionally, relevant institutional websites were screened for relevant documents.
- Search terms were fibroids, myomas, myomectomy, hysteroscopy, fertility, epidemiology, reimbursement, market access, funding, health economics, health policy, HTA, public health and Germany.

RESULTS:

- The prevalence of uterine myomas in Germany was examined in a prospective epidemiological study in Germany, which examined the prevalence of myomas in women older than 30 years by means of vaginal ultrasound. 2.296 women of seven gynecological outpatient departments in Germany were examined. (2)
- Myomas were detected in 41.6 % of all women. There exists an age dependence as with increasing age, the prevalence of uterine myomas rose from 21.3 % (30-35 years) to 62.8 % (46-50 years). Later, the number of myomas decreased again from 56.1 % (51-55 years) to 29.4 % in women older than 55 years (see Figure 1). (2)

Figure 1: Prevalence of myomas based on a German epidemiologic study



Source: Römer, 2017; Ahrend, 2016.

- The key question is when a fibroid needs to be treated in women who have an acute desire to have children. (3) This depends primarily on the existing clinical symptoms and the location and size of the fibroids (see Table 1). (4)

Table 1: Surgery indication of fibroids with respect to infertility treatment

Localization of fibroids	Symptoms	Surgery indication
Submucous	Yes	Yes
	No	>2cm: yes
Intramural, near cavum	Yes	Yes
	No	After miscarriage: yes
Intramural, far from cavum	Yes	Yes
	No	No (Except for potential birth barrier)
Subserous	Yes	Yes
	No	No (Except for potential birth barrier)
All	Closure of tubes	Yes

Source: Römer, 2015.

- Submucosal fibroids are of special relevance with respect to the desire to have children (see Table 2). (3)

Table 2: Influence of myomas on fertility

Localization	Influence
Submucous	+++
Intramural	+
Subserous	-

Source: Römer, 2015.

- One main treatment option is the operative hysteroscopy which plays an important role in the therapy of submucosal fibroids. (3)
- Fertility might improve after hysteroscopic removal of fibroids in women with previous pregnancies, especially the rate of miscarriages can be reduced (based on a prospective single-arm study at one tertiary university fertility clinic in Egypt; sample size: n = 15, see Table 3). (5, 6)

Table 3: Fertility and hysteroscopic removal of fibroids in women with previous pregnancies. Impact on miscarriage rate

	Removal of fibroids	
	Symptoms	Surgery indication
Live births (%)	3,8	63,2*
Miscarriage rate (%)	61,6	26,3**

* p < 0,01; ** p < 0,02 Sources: Shokeir, 2005; Römer 2017.

- In general, different methods of ART exist such as intrauterine insemination w/o hormone stimulation, in vitro fertilization or intracytoplasmic sperm injection.
- Reimbursement of infertility services in Germany is linked to specific eligibility criteria issued by the Joint Federal Committee (G-BA) (see Table 4). (7)
- It was decided in March 2019 that cryopreservation will be possible under certain circumstances (e.g in case of cancer or rheumatologic disease). (8)

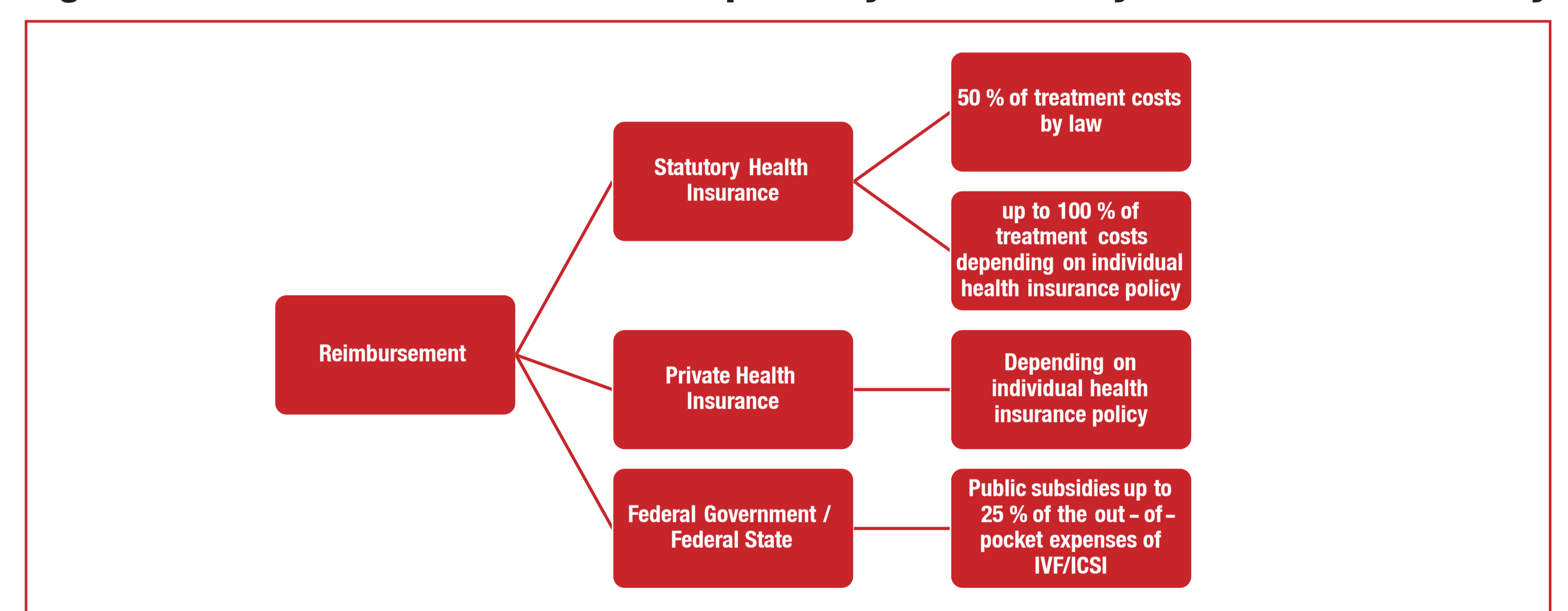
Table 4: Requirements, reimbursement rate and restrictions of infertility services in Germany

Requirements (exception in certain federal states)	Reimbursement rate / restriction
<ul style="list-style-type: none"> Heterosexual and married couple (homosexual and not married couples have to pay out-of-pocket) Maximum age of woman (25 – 40 years) and man (50 years) Both partners must be HIV negative Approved treatment plan by health insurance Special consultation by a gynaecologist before treatment start 	<ul style="list-style-type: none"> Generally, 50 % of treatment costs (costs of procedure all inclusive) will be reimbursed. This is limited to treatment cycles: <ul style="list-style-type: none"> 8 insemination cycles w/o hormone stimulation 3 insemination cycles with hormone stimulation 3 IVF or IVF/ICSI treatment cycles Renewed reimbursement of new cycles after birth of child Renewed reimbursement of new cycles after miscarriage

Source: G-BA, 2017.

- As shown in Figure 2, 50 % of the costs of an ART treatment are covered by the Statutory Health Insurance by law. Additionally, 46 health insurances offer higher reimbursement rate up to 100 % (as of January 2019) as voluntary added service (so called "Satzungsleistung").
- Furthermore, subsidies of 25% of out-of-pocket expenses may be granted by following federal states: Berlin, Brandenburg, Mecklenburg-West Pomerania, Lower Saxony, Saxony, Saxony-Anhalt, Thuringia, Hesse (as of April 2019). Requirements of those subsidies are less strict (for example non-married couples can also ask for subsidies).

Figure 2: Overview of reimbursement pathways of infertility treatment in Germany



Source: Own illustration.

- Based on German reimbursement tariffs, costs of infertility treatment vary largely depending on specific ART (intrauterine insemination w/o hormone stimulation, in vitro fertilization, intracytoplasmic sperm injection), concomitant drugs and number of treatment cycles (range of treatment costs/cycle: 200 € - 4.000 €).

CONCLUSIONS:

- More than 40 % of women over 30 years of age suffer from myomas and more than 50 % of all women in Germany may develop uterine myomas at some time in their life.
- The prevalence of fibroids increases above the age of 30 years.
- The costs of ART treatments differ significantly according to the method carried out and their reimbursement is linked to specific eligibility criteria.

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