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**12-years real-life data on successful management of recurrent urinary tract infections by OM-89 and its impact on bacterial resistance**

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**Short title:**

Real-Life Outcomes of OM-89 in Recurrent UTIs Over 12 Years

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**Abstract**

## Introduction

Evaluate long-term effectiveness, safety and tolerability of OM-89 (Uro-Vaxom®), an oral immunomodulator derived from bacterial lysates of *Escherichia coli*, in the prophylactic management of recurrent urinary tract infections (rUTIs) in women in a real-world outpatient gynecology setting.

## Methods

Retrospective, single center observational study based on data from women with a diagnosis of rUTI who received OM-89 as a single 90-day cycle or two or more cycles. Data were collected from medical records at the Mexican Institute for Infectious Diseases in Obstetrics and Gynecology (IMIGO) clinic in Monterrey, Mexico, between January 2023 and March 2024. Primary outcome was the time free of UTI recurrence. Secondary outcomes were the risk factor profiles in the treated groups, urine and vaginal antibiotic resistance profiles and the incidence of adverse events.

## Results

A total of 208 women with rUTI were included. 72.1% received a single OM-89 90-day cycle, while 27.9% underwent two or more 90-day cycles. The mean recurrence-free interval after one OM-89 cycle was  $5.3 \pm 2.6$  years, and  $4.6 \pm 2.5$  years for those with OM-89 multiple cycles. Post-treatment bacterial cultures showed a significant reduction in bacterial resistance in 72.4% of urine samples and in 37.0% of vaginal samples ( $p < 0.001$ ).

## Conclusion

A single 90-day course of OM-89 was associated with a long-term reduction in UTI recurrences and antibiotic resistance in women with rUTIs. These findings support its use as a safe and effective non-antibiotic preventive strategy in clinical practice.

## Introduction and Background

### *Clinical Relevance of Recurrent Urinary Tract Infections (rUTIs)*

Recurrent urinary tract infections represent a significant and persistent public health concern, especially among women. It is estimated that nearly 50% of all women will experience at least one UTI in their lifetime, and approximately 20–30% will develop recurrent episodes within six to twelve months of the initial infection [1]. The European Association of Urology (EAU) defines rUTIs as the occurrence of two or more infections within six months, or three or more within a 12-month period [2].

### *Burden on Quality of Life and Healthcare System*

The impact of rUTIs extends beyond immediate physical discomfort. Affected individuals frequently report impaired quality of life, including limitations in sexual activity, sleep disruption, and psychological distress such as anxiety and depression. From a healthcare system perspective, rUTIs are associated with considerable healthcare costs due to repeated physician visits, diagnostic testing, antibiotic prescriptions, and in some cases, hospitalizations [3] [4].

### *Challenges with Antibiotic-Centered Management*

The mainstay of rUTI prevention has traditionally been long-term, low-dose antibiotic prophylaxis. However, this approach carries well-documented risks, including increased rates of antimicrobial resistance, disturbance of normal microbiota (vaginal and intestinal), and a predisposition to opportunistic infections such as *Candida* spp. overgrowth [5] [6]. Global health authorities, including the World Health Organization, have emphasized the urgent need to reduce unnecessary antibiotic use in ambulatory care settings [7].

### *Rationale for Immunoprophylaxis*

OM-89 (Uro-Vaxom®), an oral immunomodulator derived from a standardized lysate of 18 strains of *Escherichia coli*, has emerged as a promising non-antibiotic strategy for the prevention of rUTIs. Its mechanism of action involves modulation of both innate and adaptive immune responses, including activation of dendritic cells, macrophage and stimulation of mucosal immunity via IgA secretion [8] [9] [10]. Multiple randomized controlled trials and meta-analyses have demonstrated that OM-89 significantly reduces the frequency of rUTIs in women compared to placebo [11] [12].

### *Need for Real-World Evidence in Gynecologic Populations*

Despite its established safety profile and efficacy in previous clinical trials, there is a need for real-world data on the effects of OM-89's use in routine gynecologic care. The majority of previous studies has focused on general urological populations. Given that women of reproductive and perimenopausal age constitute the majority of patients suffering from rUTI, tailored analyses are critical to inform implementation in this population.

## Methods

### *Study Design and Setting*

This is a retrospective cohort study evaluating the clinical effectiveness, tolerability and safety of the oral immunomodulator OM-89 (Uro-Vaxom®) for the prevention of rUTI in women. The study was conducted at the Mexican Institute for Infectious Diseases in Obstetrics and Gynecology (IMIGO) clinic in Monterrey, Mexico, on medical records from January 2023 and March 2024.

### *Participants*

Women aged  $\geq 18$  years with a clinical diagnosis of rUTI, defined as  $\geq 3$  symptomatic UTI episodes in the previous 12 months or  $\geq 2$  episodes in the previous 6 months, were eligible for inclusion, following EAU guidelines [1]. Diagnosis was confirmed by documented clinical symptoms (e.g., dysuria, frequency, urgency) and either positive urine culture or dipstick analysis.

### *Inclusion criteria*

- Female sex assigned at birth
- Age  $\geq 18$  years
- Confirmed clinical and microbiological diagnosis of rUTI
- Complete follow-up visits and procedures

### *Exclusion criteria*

- Use of systemic antibiotics within 10 days before baseline.
- Immunocompromised state (e.g., HIV, corticosteroids, chemotherapy)
- Pregnancy or lactation
- History of bladder cancer or interstitial cystitis

### *Intervention*

Participants received OM-89 (Uro-Vaxom®), an oral immunomodulator containing standardized lyophilized bacterial lysates from 18 *Escherichia coli* strains, at a dosage of one capsule (6 mg) daily for 90 consecutive days. No additional antibiotic prophylaxis was allowed during the intervention period. Rescue antibiotics were permitted in case of acute symptomatic infections, as per local antimicrobial stewardship guidelines.

### *Data Collection and Outcome Measures*

Patient data were collected from health records and structured interviews. Baseline characteristics included age, menopausal status, BMI, medical comorbidities (e.g., diabetes mellitus), number of UTI episodes in the preceding year, and previous prophylactic regimens.

### *Primary endpoint*

Time free of rUTI (time before a patient developed a UTI considered recurrent according to EAU guidelines) post OM-89 treatment initiation

### *Secondary endpoints*

- Profiling of UTI risk factors in the treated groups
- Change in bacterial resistance profile after OM-89 prophylaxis
- Safety and tolerability of OM-89 (adverse events and treatment discontinuation).

### *Statistical Analysis*

Descriptive statistics were calculated for all variables. Categorical variables were presented as frequencies and percentages, while continuous variables were summarized using mean  $\pm$  standard deviation or median with interquartile range, as appropriate.

Comparisons between pre- and post-intervention UTI frequency were assessed using the Wilcoxon signed-rank test for paired data. Kaplan–Meier survival analysis was used to estimate the time to first recurrence. Mann–Whitney U test, for subgroup analysis in premenopausal and postmenopausal women. A multivariate Cox proportional hazards model was used to identify independent predictors of recurrence, adjusting for age, menopausal status, and comorbidities.

A two-sided p-value  $< 0.05$  was considered statistically significant. All analyses were performed using STATA version 16.1 (StataCorp, College Station, TX, USA).

## **Results**

### *Study Population*

A total of 208 female patients with a clinical and microbiological diagnosis of rUTI, defined per European Association of Urology (EAU) criteria ( $\geq 2$  UTIs in 6 months or  $\geq 3$  UTIs per year), were included in this retrospective cohort analysis. Of these, 150 patients (72.1%) received a single 90-days cycle of OM-89 immunoprophylaxis, while 58 patients (27.9%) received two or more OM-89 cycles. The mean age of patients in the one-cycle group was  $49.2 \pm 15.9$  years (range: 11–94), compared to  $52.3 \pm 14.7$  years (range: 31–88) in the multi-cycle group.

### *Primary Endpoint - Time free of rUTI (time before a patient developed a UTI considered recurrent according to EAU guidelines)*

The mean duration of the rUTI-free period after the first OM-89 cycle was  $5.3 \pm 2.6$  years (range: 1.1–12.8 years). Patients who underwent two or more OM-89 cycles had a slightly shorter recurrence-free period of  $4.6 \pm 2.5$  years (range: 0.6–10.3 years) (Figure 1).

Exploratory subgroup analyses were performed based on menopausal status (pre- vs. postmenopausal).

Premenopausal women ( $n = 114$ ) showed a recurrence-free interval of  $5.0 \pm 2.6$  years, while postmenopausal women ( $n = 94$ ) showed  $5.2 \pm 2.7$  years of protection, with no statistically significant difference ( $p = 0.102$ , Mann-Whitney U test)

### *Secondary Endpoint – Risk Factor Profiles*

Notable behavioral differences were observed between treatment groups. Patients receiving only one OM-89 cycle reported a significantly higher mean number of sexual partners ( $2.73 \pm 3.92$ , range: 0–25) and an earlier age at onset of sexual activity ( $21.83 \pm 3.91$  years, range: 15–38) than those receiving multiple cycles ( $1.55 \pm 1.31$  partners; onset at  $23.86 \pm 1.31$  years). Both variables showed statistically significant differences ( $p = 0.014$  and  $p = 0.001$ , respectively; Mann-Whitney U test) (Figures 2 and 3).

A comparative analysis of various risk factors in patients having received one cycle of OM-89 versus those treated with more than one cycle was performed to identify potential patterns that may influence more frequent prophylactic courses (Table 1). First, menopause and history of gynecological surgery were slightly more frequent among patients receiving multiple OM-89 cycles (48.3% and 86.2%, respectively) compared to those receiving only one cycle (44% and 83.3%). However, these differences were not statistically significant ( $p > 0.05$ , Fisher test). Second, tobacco use and alcohol consumption were higher among patients who only received one cycle (41.3% and 70%, respectively), versus 36.2% and 60.3% in the multi-cycle group, but again, these trends were not significant. Third, a notable trend was observed in balanced nutrition, reported in 60.3% of patients undergoing multiple cycles compared to only 49.3% in the single-cycle group ( $p = 0.082$ ), suggesting a possible but not statistically confirmed association between diet and treatment courses. Fourth, regarding physical activity, a slight difference was noted (59.3% vs. 56.9%), analyzed with Pearson's test ( $p = 0.268$ ), showing no significant association. In fifth place, the use of genital soap, dyspareunia, and use of lubricants or wipes showed similar frequencies across both groups, with p-values consistently above 0.1, indicating no strong correlation with treatment frequency. In sixth place post-coital antibiotic prophylaxis was more common among patients with more than one OM-89 cycle (32.8%) compared to those with only one (21.3%), though this difference was also statistically non-significant ( $p = 0.196$ , Pearson test). None of the compared risk factors in Table 1, demonstrated statistically significant differences between patients having received a single OM-89 cycle and those treated with multiple cycles. However, trends such as better nutritional habits and higher use of post-coital antibiotic prophylaxis in multi-cycle patients may warrant further investigation in larger cohorts.

High proportion of our patients have history of gynecological surgery, particularly in the group that received multiple OM-89 cycles (86.2%). This may reflect the characteristics of the patient population at our gynecology clinic, which frequently manages patients with gynecological comorbidities. Although records do not always exhaustively detail the specific reason for each surgery for every patient over 12 years of retrospective data, a general review of the files indicates that the most common surgeries included hysterectomies (for uterine fibroids, abnormal uterine bleeding), oophorectomies, and procedures for pelvic organ prolapse. It is plausible that these surgeries, which can alter pelvic anatomy or have hormonal implications, contribute to a higher risk of rUTI or greater complexity in management, which in turn might have justified the administration of multiple OM-89 cycles.

### *Secondary Endpoint – Antibiotic Resistance Dynamics*

Among patients with paired urine cultures ( $n = 58$ ) before and after administration with OM-89, 72.4% showed a reduction in bacterial resistance following OM-89 treatment. This effect was especially notable among patients who initially harbored multidrug-resistant organisms with 1 or 2 documented resistances. Only 1.7% of patients showed increased resistance post-intervention (Figure 4).

In detail, of the 8 cases which had initial resistance of 0, seven continued with a resistance of 0 (87.5%), and only one increased to a resistance of 1 (12.5%) (meaning bacterial resistance to 1 to 3 antibiotics). Of the 18 cases with initial resistance of 1, 13 (72.2%) reduced their resistance to level 0, and 5 (27.8%) continued with level 1. Of 13 cases with initial resistance of 2 (meaning bacterial resistance to 4 to 7 antibiotics), 5 (38.5%) reduced their resistance to level 0, 6 (46.2%) reduced their resistance to level 1, and 2 (15.4%) continued with level 2. Of the 19 cases with initial resistance of 3 (meaning bacterial resistance to 7+ antibiotics), 5 (26.3%) reduced their

resistance to level 0, 9 (47.4%) lowered their resistance to level 1, 4 (21.1%) decreased their resistance to level 2, and only 1 (5.3%) continued with resistance level 3 (Figure 5).

Paired vaginal cultures (n = 138) also demonstrated significant microbiological changes: 37.0% of samples exhibited reduced resistance following prophylaxis, 59.4% remained unchanged, and 3.6% showed increased resistance. These differences were statistically significant ( $p < 0.001$ , Wilcoxon signed-rank test) (Figure 6). In detail, of the 47 cases with initial resistance of 0, 44 (93.6%) remained with a resistance level of 0; 1 (2.1%) increased its resistance to 1; 1 (2.1%) increased its resistance to 2; and 1 (2.1%) increased its resistance to 3. Of the 59 cases with initial resistance of 1, 29 (49.2%) reduced their resistance level to 0; another 29 (49.2%) remained at resistance level 1 and only one case (1.7%) raised its resistance to 2. Of the other 20 cases with initial resistance of 2, 4 (20%) lowered their resistance level to 0; 9 (45%) decreased their resistance to 1; 6 (30%) remained at resistance level 2 and only one case (5%) raised their resistance to 3. Finally, of the 12 cases with initial resistance of 3, 3 (25%) decreased their resistance to level 0; 4 (33.3%) dropped to level 1; 2 (16.7%) dropped to resistance level 2 and only 3 (25%) remained at level 3 (Figure 7).

#### *Secondary endpoint - Safety and Tolerability*

OM-89 demonstrated a favorable safety profile in the treated population. Only two patients (0.96%) reported mild gastrointestinal adverse effects (nausea and intestinal discomfort) and discontinued the treatment. No serious adverse events were reported during the observational period across any subgroup.

#### **Discussion**

This retrospective analysis of 208 women with rUTI suggests that OM-89 (Uro-Vaxom<sup>®</sup>), an oral immunomodulator derived from bacterial lysates of *Escherichia coli*, provides sustained prophylactic benefit in a real-world outpatient gynecology setting. The findings support the long-term effectiveness of OM-89 in extending the recurrence-free interval and in reducing the antimicrobial resistance profile of uropathogens in both urinary and vaginal cultures.

#### *Long-term Effectiveness*

The median duration of rUTI-free survival of 5.3 years in patients receiving one 90-day cycle is consistent with prior observations of OM-89's immune-priming effect on mucosal immunity [1] [14]. This durability of response is notable given the retrospective nature of the data and real-world heterogeneity in patient adherence and follow-up. Notably, the slightly shorter recurrence-free interval in patients receiving multiple cycles (mean 4.6 years) could reflect a higher baseline risk in this subgroup, possibly related to more complex host or behavioral factors.

These results align with randomized controlled trials that have demonstrated reductions in rUTI incidence at 6–12 months with OM-89 use [15]. However, this study extends the known benefit well beyond that window, suggesting possible long-lasting immunomodulation—a hypothesis supported by preclinical models showing enhanced innate immune memory via epithelial and lymphoid activation [8] [9].

#### *Impact of Sexual History*

The observed association between increased sexual partner number and younger sexual onset with longer-term rUTI suppression after a single cycle may indicate a distinct immunologic or behavioral phenotype. Alternatively, these findings might reflect a differential response to immune modulation in patients with high-exposure, but otherwise intact mucosal defense systems. Further prospective stratification is warranted to elucidate this subgroup effect.

#### *Antibiotic Resistance Modulation*

One of the most clinically relevant findings of this retrospective study is the observed reduction in antimicrobial resistance in both urine (72.4%) and vaginal cultures (37%). These results may be explained by a lower overall frequency of infection—and thus reduced antibiotic exposure—after OM-89 treatment, leading to re-equilibration of the vaginal and urinary microbiota [5] [6]. The statistically significant change in resistance profiles ( $p < 0.001$ ) further underscores the potential of immunoprophylaxis as a stewardship-compatible strategy in rUTI management.

Given the growing concern regarding antimicrobial resistance in *E. coli*, including extended-spectrum beta-lactamase (ESBL) production and fluoroquinolone resistance [16], immunomodulatory strategies like OM-89 represent a critical adjunct in infection control policy.

#### *Safety and tolerability*

OM-89 was well tolerated, with minimal reported adverse effects limited to mild gastrointestinal symptoms. This reinforces prior data from large multicenter trials and post-marketing surveillance studies that support the excellent safety profile of OM-89 in adult female populations [11] [12] [15].

### Limitations

This study is limited by its retrospective design, potential recall bias regarding recurrence timing, and lack of a matched untreated control group. While the findings are strengthened by the large sample size and real-world setting, future randomized, prospective studies with molecular and immunologic endpoints are required to validate these observations.

As the retrospective nature of our study, based on existing clinical records over 12 years, makes it impossible to post-hoc include a contemporary, matched control group with such specific interventions. While we conducted exploratory subgroup analyses and internal comparisons (e.g., between patients with one or multiple OM-89 cycles) to partially mitigate this limitation, we acknowledge that these do not replace a formal control group. We do not have a retrospective cohort of rUTI patients who exclusively received general recommendations or antibiotic prophylaxis under the same conditions and during the same follow-up period to allow for robust retrospective matching without introducing significant uncontrollable biases. We have emphasized the value of our study as a 'real-world' analysis that complements previous randomized controlled trials, evaluating the long-term effectiveness of OM-89 in a daily gynecological clinical setting. In future research, we plan to address this limitation by designing prospective studies with appropriate control arms, including the possibility of comparing with general recommendations or alternative prophylactic measures.

The retrospective nature of the study did not allow for systematic and standardized data collection on the exact administration of these recommendations or the degree of individual patient compliance. Clinical records primarily focus on diagnosis, pharmacological treatment, and laboratory results.

We acknowledge that adherence to these behavioral measures can influence UTI recurrence. This is an additional limitation, emphasizing that a prospective design would be necessary to accurately evaluate the delivery and impact of compliance with these recommendations. For future studies, we would consider integrating standardized tools to record both the counseling provided and patient adherence.

### Conclusion and Future Directions

OM-89 demonstrates long-term effectiveness and favorable safety in the prevention of rUTIs among women, with additional benefits in reducing antimicrobial resistance. Its utility as a non-antibiotic, immune-based prophylactic agent warrants further integration into clinical practice guidelines, particularly in populations at high risk for antibiotic overuse and resistance development. This is the first retrospective study with a long-term follow up (years after treatment initiation), confirming OM-89's effectiveness in real-life settings. This study provides evidence of long-term protection from rUTIs lasting years after OM-89 treatment initiation. Also, similarly strong OM-89 protection against rUTIs was shown in pre and postmenopausal women (confirming previous data by Popa et al, 1996 in 58 post-menopausal women) [17]. The study findings support OM-89's role in reducing bacterial resistance with a higher impact on urine cultures than on vaginal cultures. Further research is warranted to understand the different impact in urine compared to vaginal cultures.

This real-world, retrospective analysis of this study adds compelling evidence to the growing body of literature supporting the long-term prophylactic efficacy of OM-89 (Uro-Vaxom®) in women with rUTI. A single 90-day immunotherapy cycle was associated with extended recurrence-free survival, sustained reductions in uropathogen antimicrobial resistance, and excellent tolerability in an outpatient gynecology setting. These findings reinforce OM-89's role as a non-antibiotic strategy for rUTI management, aligning with international efforts to mitigate antimicrobial resistance and reduce unnecessary antibiotic exposure [7].

Given the retrospective design, further prospective randomized controlled trials with immunological biomarkers, patient-reported outcome measures (PROMs), and microbial genomics are warranted to validate the observed benefits and elucidate mechanisms of immune protection. Stratification by sexual behavior, hormonal status, and prior antibiotic exposure could further optimize patient selection for OM-89 and guide personalized prevention strategies.

In parallel, implementation studies are needed to evaluate OM-89 integration into antimicrobial stewardship programs, especially in high-burden regions or populations with limited access to urologic subspecialty care. Health economic modeling could further clarify its role as a cost-effective alternative to chronic antibiotic suppression.

Finally, collaborative multicenter networks should prioritize longitudinal registries of rUTI patients receiving OM-89 to monitor long-term outcomes, resistance trends, and quality-of-life metrics in real-world settings.

In an era where personalized medicine and resistance mitigation are converging priorities, oral immunoprophylaxis with OM-89 stands out as a scientifically grounded, patient-friendly, and system-compatible tool for the prevention of recurrent urinary tract infections.

## Statement of Ethics

Ethical approval and consent are not required for this study in accordance with local or national guidelines.

1. Ethical exceptions for no-risk studies According to the Declaration of Helsinki (WMA, 2013), the requirement for ethical approval can be waived when: "the research involves solely the review of already existing and properly anonymized data, without any intervention on the participants or potential risk." This applies to observational retrospective studies, where: Clinical data already collected are used. There is no contact with patients. Data are anonymized or coded to ensure confidentiality. **【18】**
2. Support from international guidelines a. CIOMS - Council for International Organizations of Medical Sciences (WHO/UNESCO) "Studies with fully anonymized retrospective data may not require formal ethical review if there is no possibility of identifying individuals" (CIOMS Guideline, 2016, Guideline 2) **【19】**
3. US Federal Regulations (45 CFR 46.104, Common Rule) Under US regulations: "Research involving the collection or study of existing data... if these sources are publicly available or the information is recorded in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects" is exempt from IRB review. **【20】**

## Conflicts of interest Statement

Jose Tiran-Saucedo MD

Author is speaker for OM Pharma, MSD, ADIUM, Pfizer, Organon and Grunenthal.

Author is consultant for OM Pharma, ADIUM, MSD, and Grunenthal.

Author is researcher for OM Pharma and VOPEMED

Yvette K. Leon-Camacho MD- The author have no conflicts of interest to declare.

Arturo C. Berber- The author have no conflicts of interest to declare.

Claudia V. Meléndez González MD- The author have no conflicts of interest to declare.

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## Authors contributions

Jose Tiran-Saucedo MD- Author

Yvette K. Leon-Camacho MD- Conceptualization, Data Curation, Formal analysis, Investigation, Methodology, Supervision, Validation, Visualization, Writing- original draft.

Arturo C. Berber- Formal analysis, funding acquisition, project administration, resources, validation.

Claudia V. Meléndez González MD- Data curation, Investigation, writing- review and editing.

## Data availability statement

All data generated or analyzed during this study are included in this article. Further enquiries can be directed to the corresponding author.

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## FIGURES

**Fig. 1. Overall years free of recurrent urinary tract infections in patients receiving one cycle vs. two or more cycles of OM-89.**

**Fig. 2. Mean and 95% Confidence intervals related to age onset of sexual activity.**

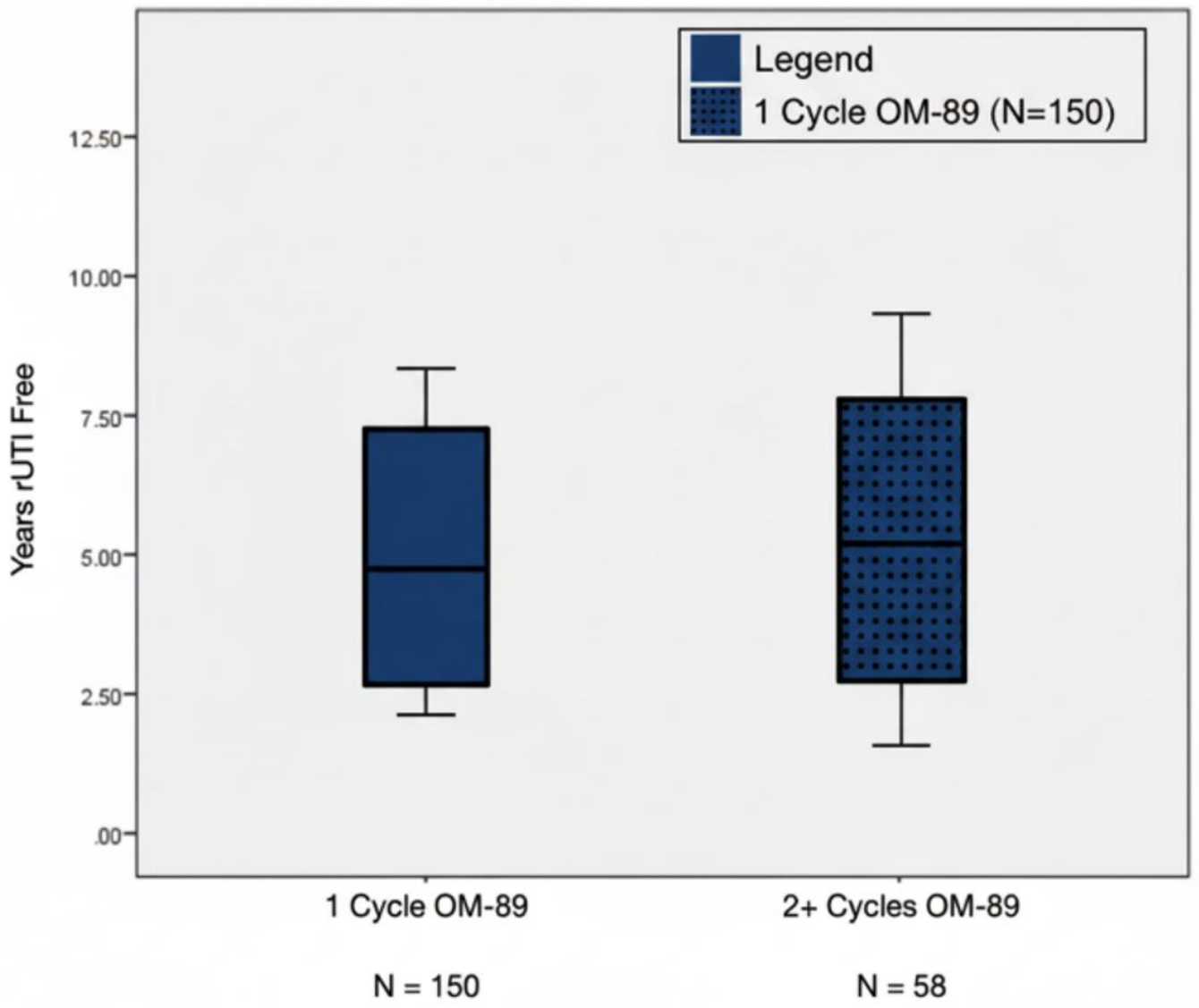
**Fig 3. Mean and 95% Confidence intervals related to the number of sexual partners.**

**Fig. 4. Effect of OM-89 on bacterial resistance in urine cultures.**

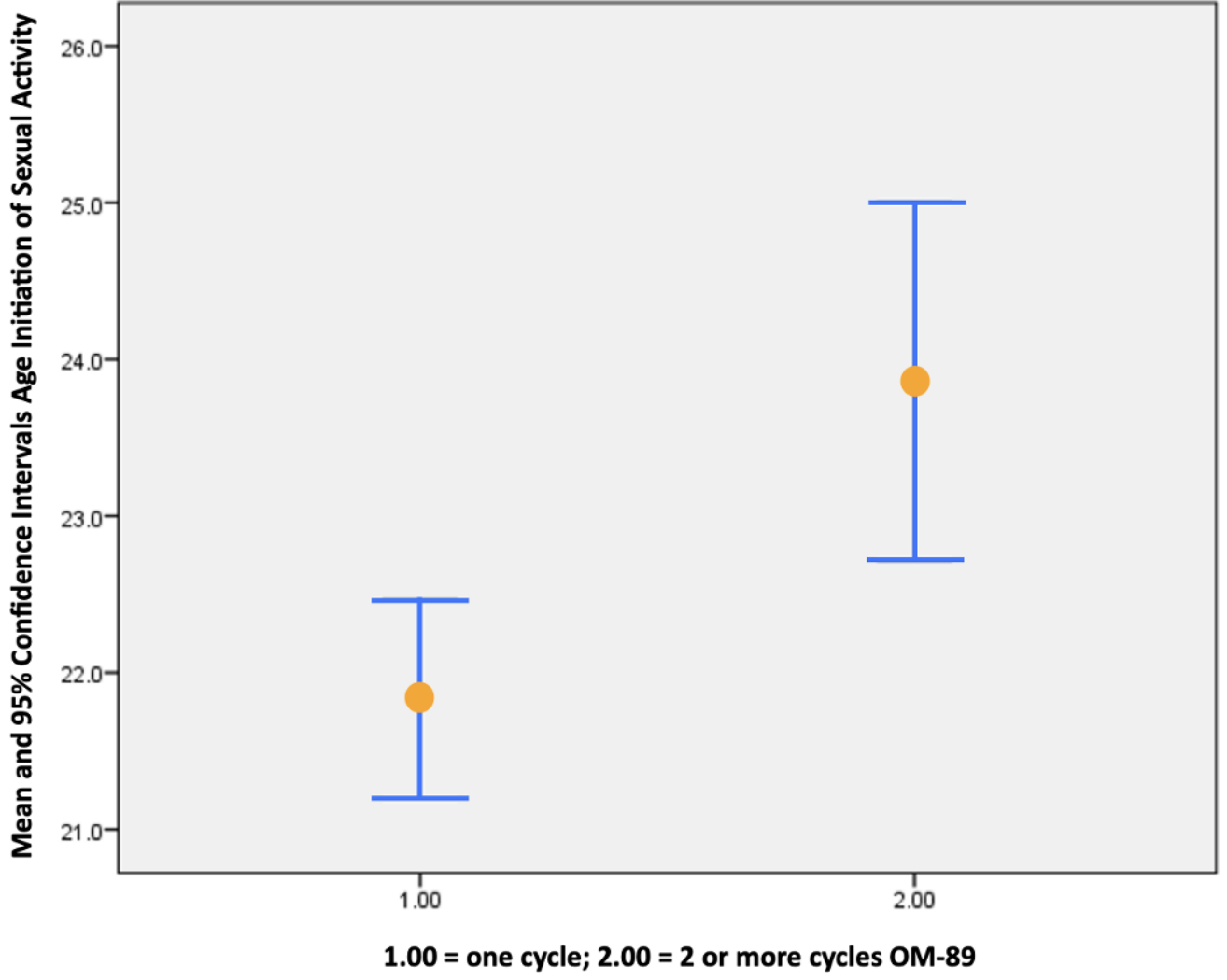
**Fig. 5. Resistance profile in paired urine cultures before and after treatment cycle with OM-89.**

**Fig. 6. Effect of OM-89 on bacterial resistance in vaginal cultures.**

**Fig. 7. Resistance profile in paired vaginal cultures before and after treatment cycle with OM-89.**

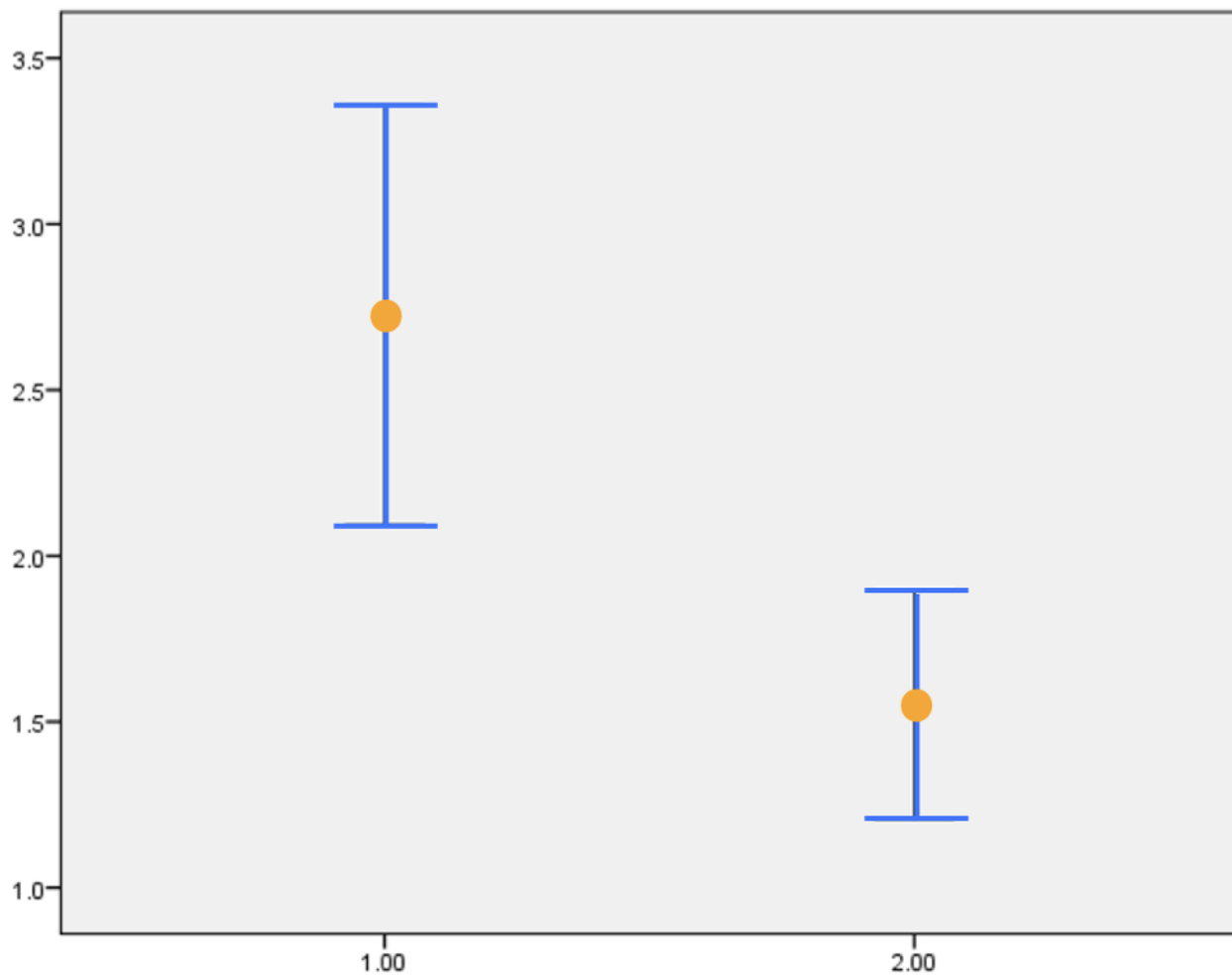


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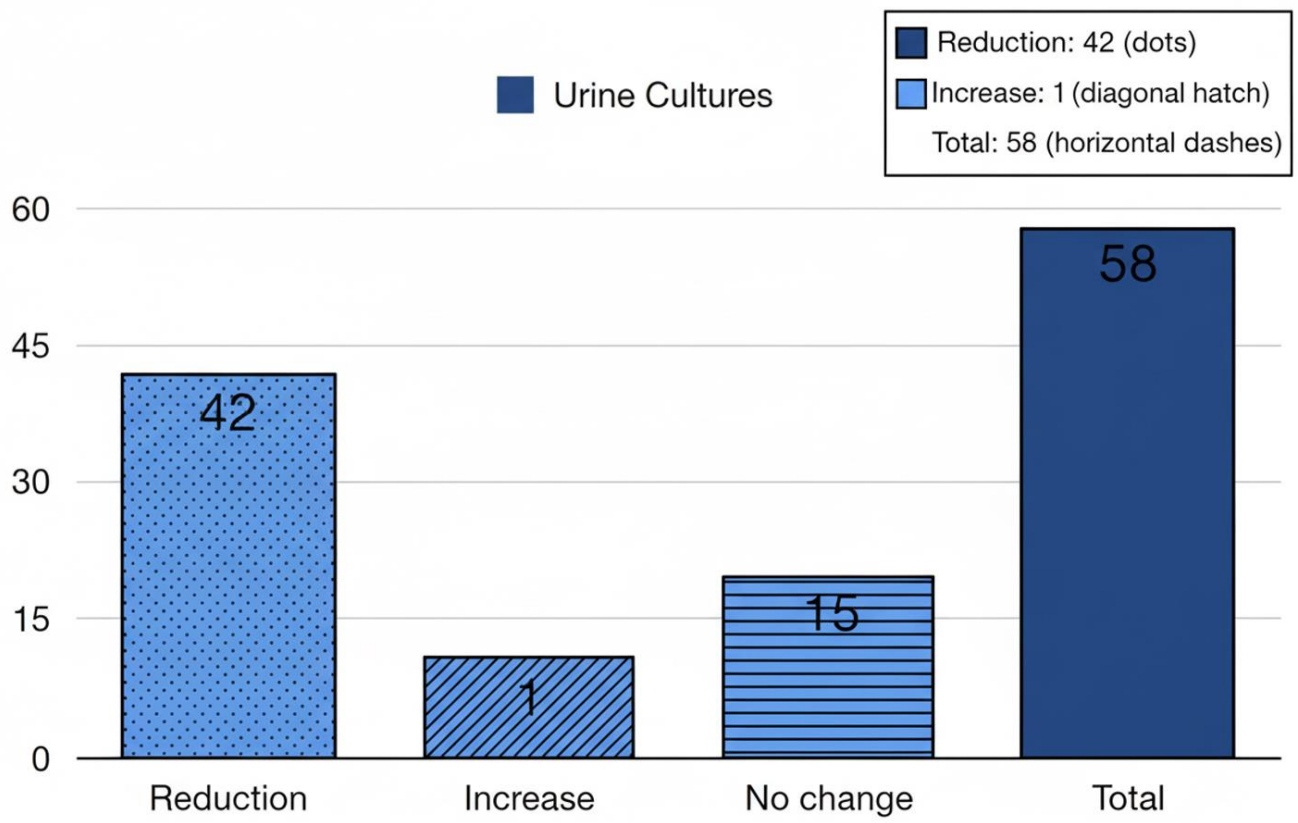
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Mean and 95% Confidence Intervals on Number of Sexual Partners

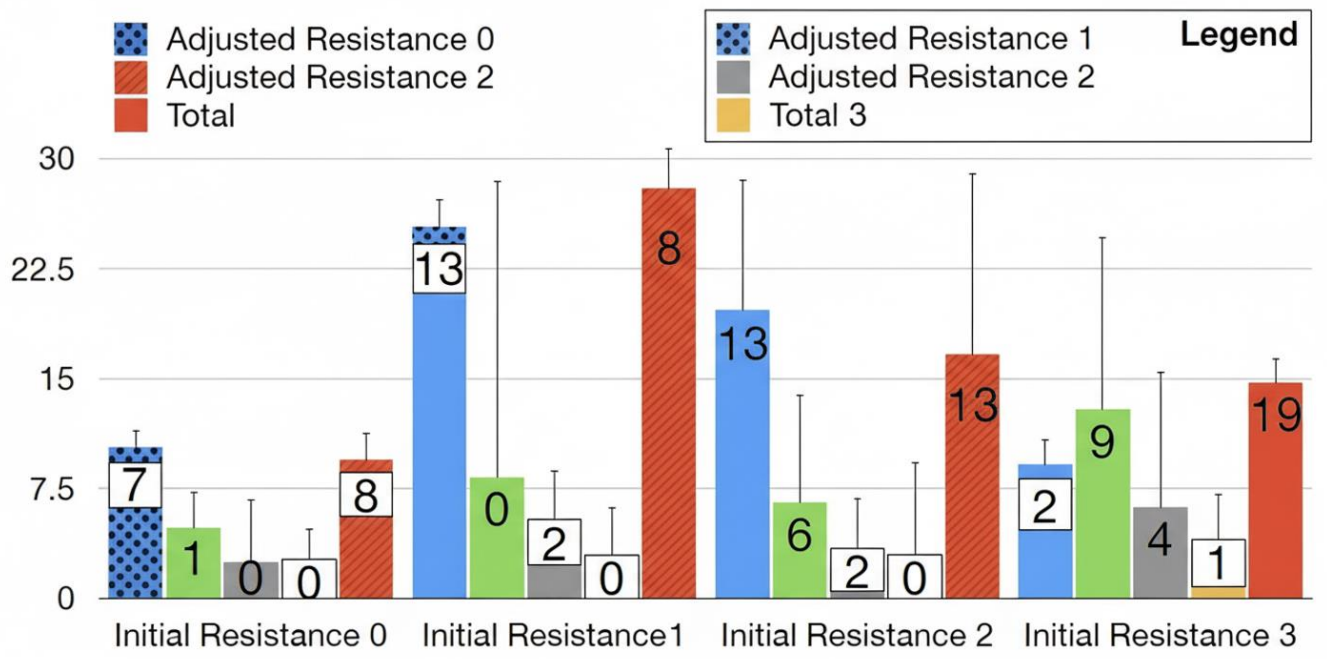


1.00 = One cycle; 2.00 = 2 or More cycles OM-89

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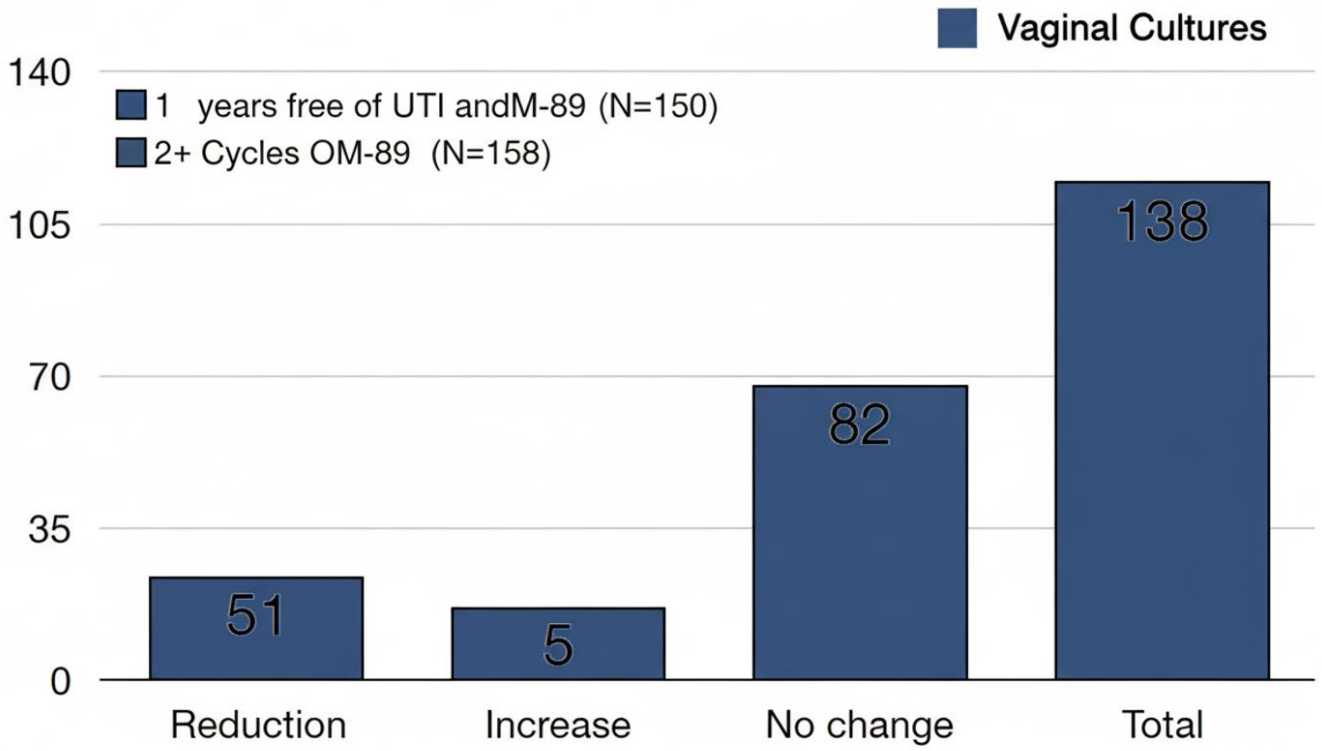


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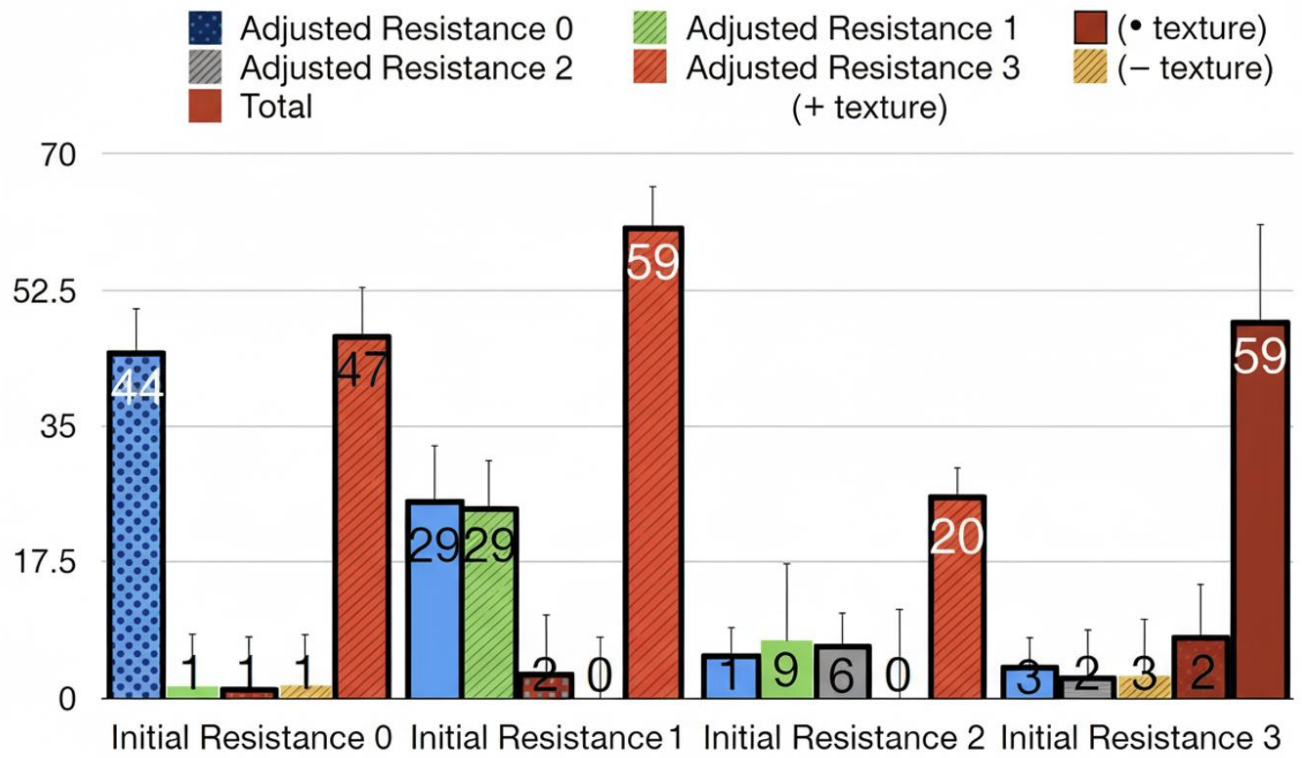


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■ Vaginal Cultures



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**Table 1.** Comparison between risk factors in patient treated with one OM-89 cycle versus treated with more than one cycle.

<b>Variable</b>	<b>Patients with one OM- 89 cycle</b>	<b>Patient with more than one OM-89 cycle</b>	<b>P and Test</b>
<b>Menopause</b>	46% (66/150)	48.3% (22/58)	0.334 Fisher
<b>Gynecology surgery</b>	83.3% (125/150)	82.3% (52/58)	0.393 Fisher
<b>Tobacco use</b>	41.3% (62/150)	36.2% (21/58)	0.391 Fisher
<b>Alcohol use</b>	70% (105/ 150)	60.4 % (35/57)	0.011 Fisher
<b>Balance nutrition</b>	49.3% (74/150)	60.3% (35/58)	0.022 Fisher
<b>Physical Activity</b>	59.3% (89/150)	56.9% (39/57)	0.264 Pearson
<b>Use of genital soap</b>	79.3% (119/150)	78.2% (43/58)	0.286 Fisher
<b>Dyspareunia</b>	50.7% (76/150)	60.3 % (36/57)	0.136 Fisher
<b>Lubricant use</b>	37.3% (56/150)	32.8% (19/58)	0.368 Fisher
<b>Wipes use</b>	31.3% (47/150)	41.2% (24/57)	0.124 Fisher
<b>Post-coital prophylaxis</b>	21.3% (32/150)	32.8% (19/58)	0.196 Pearson