APPENDIX 3:

INFORMATION LEAFLET FOR PATIENTS WITH RECURRENT CYSTITIS

WHAT IS CYSTITIS?

Cystitis or lower urinary tract infection is a bladder inflammation caused by bacteria. The main symptoms include a burning sensation when passing urine, urgency to urinate (pollakiuria), and sometimes blood in the urine (hematuria). **Recurrent cystitis** is usually defined as four episodes of bladder infection within the previous 12 months.

A **urine dipstick test** is the first step in guiding the diagnosis when leukocytes and/or nitrites are detected. Urine culture can be performed in order to identify the bacteria involved and their antibiotic susceptibility.

WHAT IS THE DIFFERENCE WITH URINARY TRACT COLONIZATION?

WHAT ARE THE OTHER TYPES OF URINARY TRACT INFECTION?

If your urine is cloudy and/or foul-smelling but you do not experience any discomfort, it is therefore not cystitis but **urinary tract colonization**. There are bacteria in the urine, however they do not cause any infection. In such cases, you don’t need to take an antibiotic but should simply increase your fluid intake.

Cystitis refers to an infection of the bladder, while **pyelonephritis** refers to an infection of the kidneys. Common symptoms of pyelonephritis include fever and/or chills and/or back pain. The infection must be rapidly treated with a different antibiotic than the one recommended for the treatment of cystitis.

WHAT CAUSES CYSTITIS? HOW CAN I PREVENT IT?

Bacteria present on the **perineum** (from the digestive tract and vaginal flora) can enter the bladder through the urethra. To prevent these bacteria from going into the bladder and multiplying, you can use the following tips:

- Drink 1.5 L of water each day so as to urinate every 3 hours during daytime, **avoid bladder irritants** (coffee, tea, tobacco, alcohol...)
- Do not delay going to the toilet, do not void in a standing or crouching position, **urinate after sexual intercourse**
- **Wipe front to back**, **avoid diarrhoea or constipation**
- Maintain good intimate hygiene: external wash only, once a day, using a neutral pH soap
- **Symptomatic treatment of vaginal dryness if necessary** (estriol cream, hyaluronic acid)
- **Apply vaseline to the meatus after urination or before activities that promote infection**

Propositions in italics are still under evaluation
WHAT SHOULD I DO IF CYSTITIS SYMPTOMS APPEAR?1

**IN ORDER TO AVOID ANTIBIOTICS:**

- Increase hydration to 3L per day2 (forced diuresis)
- Relieve pain with:
  - Phloroglucinol
  - Ibuprofen2

**IF NO IMPROVEMENT WITHIN 48 hours**

<table>
<thead>
<tr>
<th>SIMPLE RECURRENT CYSTITIS...</th>
<th>... OR WITH RISK OF COMPLICATIONS</th>
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<tbody>
<tr>
<td>Do a urine dipstick test3</td>
<td>Try to wait for the urine culture and antibiotic susceptibility test results4 to choose the most suitable antibiotic with your doctor, OTHERWISE Fosfomycin Trometamol OR Nitrofurantoin</td>
</tr>
<tr>
<td>Then self administer4: Fosfomycin Trometamol OR Pivmecillinam</td>
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In 40 % of cases, antibiotics are not necessary for cure. They act directly on the normal bacterial flora (microbiota) and may have adverse effects, e.g. fungal infection (thrush) or diarrhoea. Their use also increases the likelihood of bacterial resistance to antibiotics5.

If your cystitis episodes keep occurring very frequently (> 1 / month), or are specifically related to sexual intercourse, you need to discuss with your physician whether you should take a prophylactic antibiotic treatment, i.e. an extended antibiotic course to prevent cystitis (Fosfomycin Trometamol 1 sachet/week or Trimethoprim 1 pill a week or 2 hours before/after sexual intercourse, as prescribed by your doctor).

**...WHAT ABOUT NON-ANTIBIOTIC TREATMENTS?**

- Phytotherapy:
  - cranberries if infection due to *E. Coli*: 36 mg/d of proanthocyanidins, during 3 to 6 months
  - Other: treatment of the episode with Bussereole6, Heather, or Hibiscus
- Prevention or treatment of the episode using D-Mannose if *E. Coli* infection
- Treatment of the episode with Aromatherapy6: essential oils of thyme, cinnamon, tea tree, savory
- Relaxation and pain management techniques: sophrology, yoga, hypnosis
- Vaccines: oral route or vaginal suppository unavailable in France (available in Switzerland or Belgium)

**WHICH FURTHER EXAMINATIONS SHOULD BE CARRIED OUT?**

If the urological or the gynaecological examination results are normal, no further investigation will be systematically performed except for menopausal women and/or women with specific medical histories. For all other cases, management should be discussed by a multidisciplinary team including an infectious diseases specialist, and conclusions communicated to the general practitioner.

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1Subject to your general practitioner’s review, at least twice a year. Should treatment failure occur, contact your doctor
2In the absence of medical contraindication: check with your doctor
3After 4 to 6 episodes of cystitis, you should have a urine culture to look for antibiotic resistance
4Talk to your doctor about delayed prescribing of urine culture and/or antibiotics according to your situation
5This is why Fluoroquinolones (Officet®, Ciflox®) and third generation Cephalosporins (Oroken®, Rocéphine®) are not recommendedContraindicated in case of pregnancy and breastfeeding