

**COLLI-PEE® For customized standardized first-void urine collection**

As a trusted partner of diagnostic companies, Novosanis develops customized versions of Colli-Pee® for improved diagnostic accuracy and patient comfort. Bespoke tube design allows high-throughput processing, centrifugation and workflow optimization.



Successful automation starts with sampling



**UCM-Preservative For improved stability of biomarkers in sample**

The collection tube of the Colli-Pee® device contains a UCM (Urine Conservation Medium) buffer for a general preservation of the urine during storage and transport. This will allow for storage at ambient temperature for up to 7 days. The combination with the UCM preservative is CE-marked.

1. Siebren Dijkstra et al. 2017, NPV data on page 663
2. Lin SY et al. 2017
3. Delanghe et al. 2013
4. Vorsters et al. 2014
5. CDC "The National Healthcare Safety Network (NHSN) Manual", 2013, USA
6. Ying-Hsiu Su et al. 2004
7. Krishnamurthy et al. 2017



GAME-CHANGING SAMPLING DEVICES

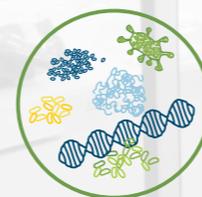
**TOWARDS A WORLD WITHOUT CANCER**

*"The predicted global cancer burden is expected to exceed 20 million new cancer cases annually by 2025, compared with the estimated 14.1 million new cases worldwide in 2012. (WHO estimates)"*

Early detection of cancer greatly increases the chances for successful treatment, improving the overall survival and quality of life of patients.

Biomarkers, biological molecules such as proteins or nucleic acids, play a critical role in the course of the disease. They can be found in tissues and bodily fluids such as urine and can be used to detect cancer in an early stage and to follow up disease progression. Easy detectable biomarkers improve early diagnosis and cancer outcome.

As urine is an easily accessible and non-invasive sample, the use of urinary biomarkers to detect, monitor and follow up treatment of urological but also systemic cancers is attractive.



BIOMARKER TESTING IN URINE HAS POTENTIAL TO TRANSFORM CANCER CARE



LIQUID BIOPSIES DON'T NEED SURGICAL INTERVENTION



URINARY BIOMARKER TESTING CAN AVOID UP TO 41% OF PROSTATE BIOPSIES<sup>1</sup>



## COLLI-PEE® An innovative solution to standardize urinary biomarker testing

Reproducible urine testing requires appropriate collection methods and storage conditions. For analytes such as nucleic acids it is critical to use a proper preservative upon collection.<sup>2</sup>

[“Well standardized procedures for collection, transport, sample preparation and analysis should become the basis of an effective diagnostic strategy for urinalysis”]<sup>3</sup>

- Volumetric and standardized collection of first-void urine containing a higher amount of DNA than subsequent fractions<sup>4</sup>
- Allows hygienic and non-invasive self-sampling (at home)
- Increases patient comfort for men and women
- Collector tube prefillable with preservative
  - Correct sample-to-buffer ratio
  - Immediate mixing
  - Avoids biomarker degradation

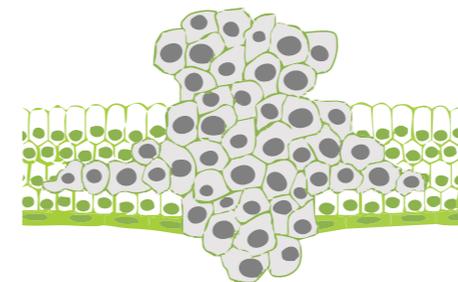


## COLLI-PEE® Urine, a promising liquid biopsy sample type for biomarker testing

### When tissue is an issue

Biopsies are essential tools to achieve the objectives of precision oncology. Unfortunately obtaining tissue is not always feasible.

Liquid biopsies, including urine, have the potential to address the difficulties of (repeated) sampling and the limitations of tumor heterogeneity.



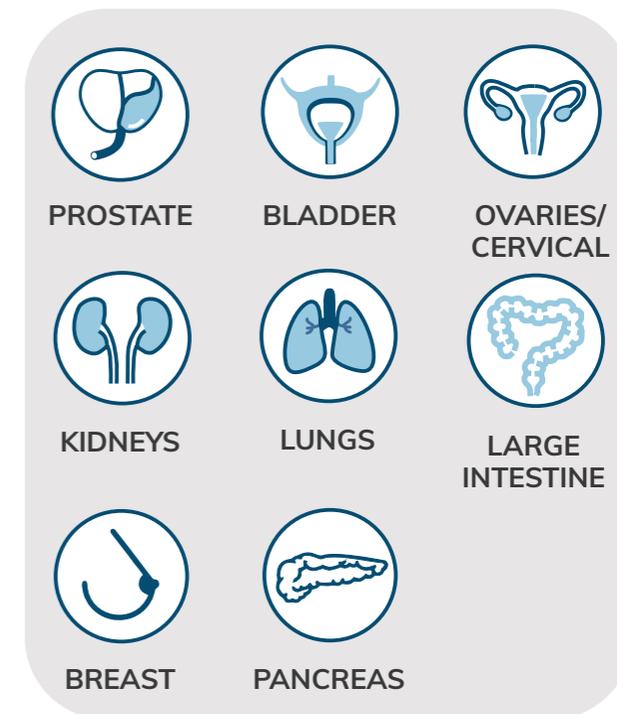
Cancer cells growing through normal tissue

### Can yellow be the new red?

Urine testing is non-invasive, allowing cost-efficient fast and serial sampling for real-time monitoring of cancer progression and therapeutic effect.

Unless visibly contaminated with blood, urine does not carry any risk of bloodborne pathogens (HIV, HBV, HCV) transmission.<sup>5</sup>

Due to the low protein content of urine, isolation of DNA from urine is technically easier than from serum or plasma.<sup>6</sup>



[“Urine sampling adds depth and convenience: urine cell-free tumor DNA exceeds plasma sensitivity in studies of renal, bladder and prostate cancer, but surprisingly also in some series of lung and colon cancers”]<sup>7</sup>

 NON-INVASIVE LIQUID BIOPSY

 STANDARDIZED SELF-SAMPLING

 USER FRIENDLY