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The best fight against cancer is to prevent it, and that is now possible with safe and very simple measures.

Salvagene expands its cancer prevention panel exclusively for premium clients as part of its health optimization program.

When it comes to optimizing health, cancer prevention is one of the most critical pillars. Cancer remains a social taboo and is often perceived as an uncomfortable subject—yet it affects a significant portion of the population. Incidence rates have been rising steadily for years—a trend closely linked to modern lifestyle factors and increasing environmental burdens, but also, at times, due to well-meaning but misguided health advice.

This is a topic we will return to later. While novel medications and cancer therapies have significantly improved survival rates, these often come at the cost of a substantially diminished quality of life. According to data from the OECD and the International Agency for Research on Cancer, the lifetime incidence of cancer ranges between 41% and 52% of the population. If undiagnosed cases are considered, this number is likely even higher.

Fortunately, cancer prevention today can be pursued with a level of effectiveness never seen before. At Salvagene, our approach is built on a proven three-pillar strategy:

First: The professional application of AI technology. Artificial intelligence is most effective when it is exclusively fed with each client's personal health data, resulting in a highly precise and personalized data foundation for risk assessment. Salvagene was the first company to provide each premium client with a dedicated AI clientserver—an individualized AI system that continuously processes only that client's own data.

This personalized AI system—at Salvagene, we call it Personal Data Sovereign AI

analyses, particularly of so-called tumor suppressor genes and oncogenes,

(PDS-AI)—performs longitudinal evaluations based on regularly conducted epigenetic

quantifying the magnitude of epigenetic changes in direct relation to the time intervals

between measurements. Simultaneously, it integrates immunological parameters to correlate immune system dynamics with epigenetic variation. The result is an individualized risk profile with a level of analytical precision and predictive validity that has not previously been achievable in this form. This approach allows for the immediate detection and neutralization of even the most subtle

molecular changes that might carry a long-term risk of carcinogenesis, thereby preventing malignant progression at the earliest conceivable point. At Salvagene, we believe that true precision medicine requires a complete shift in how we use data. Our Personal Data Sovereign AI is trained solely on your individual biological profile—your genetics, your epigenetics, your biomarkers. This approach enables an unprecedented level of diagnostic precision, identifying and neutralizing even the earliest micro-signals of disease long before they manifest clinically.

Importantly, this cutting-edge AI technology does not replace but amplifies our work: it

builds on Salvagene's 30-year track record in preventive medicine. The integration of

PDS-AI into our practice has proven to be an invaluable enhancement, elevating the

effectiveness and depth of our personalized prevention strategies to a new level of medical excellence. **Second:** Epigenetics. This field plays a key role because epigenetic states particularly methylation and acetylation—are the first to change, paving the way for potential cellular transformations. Early monitoring of these markers allows for the identification of risk patterns long before pathological changes arise. Salvagene was

also among the first health organizations worldwide to systematically incorporate

epigenetic analysis into preventative medicine.

Third: If pathological cellular changes have already occurred, we now have access to the most advanced and cutting-edge therapeutic options that are far less invasive than traditional cancer treatments like chemotherapy or radiation. Here, too, AI enables precisely targeted, minimally invasive intervention. More details on this follow later in the text.

Exkurs

Multistage Carcinogenesis and the Importance of Early Multi-Level Diagnostics

Carcinogenesis—the process by which normal cells transform into malignant ones typically unfolds across four progressive stages: initiation, promotion, progression, and ultimately malignancy. These stages can span many years, even decades, often without the manifestation of noticeable symptoms. This latency makes it critical to implement diagnostic strategies capable of detecting early alterations across all phases of tumor development.

Three interconnected biological levels play key roles in this multistage transformation:

Genetic Mutations: These mutations lay the foundational groundwork for oncogenic transformation. Within our annual program, they are assessed during the Genetic Update, which screens for key oncogenetic alterations and inherited predispositions.

Epigenetic Modifications: Epigenetic changes—such as aberrant DNA

methylation or histone modification—initiate and stabilize the malignant cellular phenotype. These changes are dynamic and reversible, making them both diagnostically informative and therapeutically relevant. We monitor them up to four times per year as part of the Aging Report, allowing for early detection and trend analysis. **Immunological Failure:** The immune system fails to recognize or eliminate

marks the transition into clinically relevant cancer. Immune status and function are systematically evaluated in both the Mid-Year and Annual Health Assessmentsthrough comprehensive immunoprofiling. Together, these three layers form the biological framework of cancer evolution—and

transformed cells, enabling malignancy to take hold. This immunological breakdown

personalized lifestyle interventions. In this context, a growing number of individuals are turning to self-optimization strategies—ranging from intensive supplementation and fasting regimens to performance-enhancing protocols and biohacking—in search of enhanced vitality,

resilience, and long-term disease prevention. However, without precise diagnostics

and scientific oversight, such efforts can inadvertently carry new risks.

equally the diagnostic framework of our integrative prevention model. This model not

only supports early detection but also informs the boundaries and efficacy of

A core element of our prevention strategy is the monitoring of tumor suppressor genes—among the most important epigenetic markers for cancer prevention. These genes play a central role in regulating uncontrolled cell growth and are often deactivated through epigenetic mechanisms such as methylation or deacetylation. We have been regularly monitoring these markers for our clients for several years.

genes-exclusively for our premium clients-including RASF1A, CDKN2A, SHOX2, and HOXD3. These additions enable even earlier and more precise identification of emerging risks. We have also included gender-specific markers, such as GSTP1 for men, which is found to be hypermethylated in over 90% of all prostate cancer cases. Beginning in September 2025, all tumor suppressor genes included in the test for our premium clients will be reported individually, showing detailed levels of demethylation, methylation, and gene activity. Starting October 1, this reporting standard will also apply to oncogenes, which will then be added to the panel—allowing the same level of precision and visibility for these markers as well.

As of June 1, 2025, we have significantly expanded our panel of tumor suppressor

From age 50 onward, we recommend checking these markers every three months—at minimum, every six months. If changes are detected, we provide personalized recommendations for intervention. In most cases, these consist of simple, low-threshold lifestyle adjustments that can successfully reverse the

risk pattern completely before any cellular changes occur.

If such low-level interventions are no longer sufficient—often due to a prolonged lack of monitoring—novel classes of epigenetic medication are now available. These include DNA methyltransferase inhibitors, which block the enzymes responsible for maintaining harmful methylation patterns, particularly in deactivated tumor suppressor genes. A second class consists of histone deacetylase inhibitors, which prevent the removal of acetyl groups from histones. This leads to a more open DNA structure and can restore the expression of previously silenced tumor suppressor genes.

Looking ahead to late 2026, additional epigenetic modulators are expected to become available. These include inhibitors targeting EZH2, BRD4, and IDH1/2—all of which influence the epigenetic regulation of tumor cells. Their effective application will continue to rely on consistent, long-term monitoring of methylation patterns in critical

tumor suppressor genes. A similar concern applies to the growing market of new health-optimizing substances that, due to their classification, are not subject to regulatory oversight by authorities. This can pose a significant risk to consumers—especially when such substances are used in combination with others—due to the lack of scientific validation, quality control, or interaction monitoring. Regulatory bodies such as the FDA and EMA were already significantly overstretched in the past, and current structural reforms have left

consumers even more exposed and on their own. At Salvagene, we see it as our

responsibility to actively counterbalance this regulatory gap—protecting our clients as

much as possible and, above all, identifying and preventing potentially carcinogenic developments from the outset through truly comprehensive health guidance. By combining Al-driven data analysis, epigenetic monitoring, and targeted, lowintensity interventions, cancer prevention can now be carried out at an unprecedented level of precision and effectiveness—with measurable impact and the long-term goal of a cancer-free life. Salvagene was among the pioneers in both personalized Al

application and epigenetic diagnostics—an aspiration we continue to pursue with care

and responsibility in the spirit of holistic health optimization.

