

LONGEVITY101

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RESCUE SERVICE
HEALTH ISSUE

MY GENOMIC BLUEPRINT

A Review of Dr. Roberta Kline's
HEALTH GUIDANCE CONSULT with
Ret. FDNY Firefighter Sal Banchitta

Plus a foreword by: Dr. Robert Bard



KLINE

Functional health professionals recommend
epigenetic and genomic testing for individuals
with occupational exposures.



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A GENOMIC CONVERSATION (part 1): An Expanded Review of Dr. Roberta Kline's Functional Consultation with Retired Firefighter Sal Banchitta



In a candid and wide-ranging consultation, Dr. Roberta Kline, an expert in genomic medicine, met with retired New York firefighter and 9/11 first responder Sal Banchitta to explore the role of genetics and genomics in personal health, occupational exposures, and family risk. Their conversation — part of the *Get Checked Now* initiative — offered insights not only into Sal's

personal health but also into the broader applications of precision medicine for first responders. From the outset, the conversation made clear that this was more than a routine consultation. It was a merging of medical science, lived experience, and advocacy for a vulnerable occupational community.

Foreword

By Dr. Robert L. Bard, MD, DABR, FASLMS



As a specialist in diagnostic imaging, I have long believed that the future of medicine lies in precision — in seeing not only what's happening inside the body but understanding why it's happening and how best to respond. Our ability to map disease through advanced imaging has dramatically improved outcomes for countless patients. But the missing piece, for too long, has been the genetic roadmap that guides treatment decisions and predicts risk. That's why the work of physicians like Dr. Roberta Kline is so essential to the next generation of healthcare. Her expertise in genomics provides that deeper understanding — identifying inherited risks, personalizing treatment, and, most importantly, helping individuals like Sal Banchitta understand how their unique DNA interacts with the environment around them.

Sal represents a remarkable story of resilience and service. As a 9/11 first responder, he embodies the kind of occupational exposure risks that make precision medicine not just valuable but necessary. His commitment to his fellow firefighters and his curiosity about his own health exemplify why we must continue to integrate genetics and genomics into routine care for first responders.

This consultation isn't just about one man's health; it's about creating a new model for care in professions where danger is part of the job description. By combining diagnostic imaging, genomics, and pharmacogenomics, we can chart a clearer, more personalized path to health, longevity, and prevention. I commend Dr. Kline for her thoughtful work in this consultation, and I applaud Sal for his advocacy and leadership. It is through conversations like this that we forge a new, more informed future in medicine.



Dr. Robert L. Bard, MD, DABR, FASLMS

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Integrating Imaging and Genetics: A Diagnostic One-Two Punch

3/21/2025 - The session opened with Dr. Robert Bard, a veteran diagnostic imaging specialist, setting the stage by describing the synergy between imaging and genetic testing in modern medicine. “If you find the cancer, you are able to see where it is,” Dr. Bard explained, “and then you need the family history to see what would cause it, what would treat it better, and how to avoid it in the future.”

Dr. Bard stressed how imaging and genetics work hand-in-hand. Imaging identifies disease in the body; genetics uncovers inherited predispositions and dictates treatment direction. “It’s like a map for survival,” he said. “Imaging finds it, genetics tells you how you’re going to live with it and how you’re going to treat it successfully.” This framework would become central to the consultation between Dr. Kline and Sal.



Genetics, Genomics and Personal Health: A Primer

Dr. Kline began by explaining the foundational concepts behind genetics and genomics. “Your DNA is sort of your blueprint for your health,” she told Sal. “Much of it is inherited, but the final outcome is often determined by how your genes are interacting with the environment.”

She broke it down into two components: inherited mutations (which directly cause disease, like BRCA gene mutations linked to breast and prostate cancer) and genomic variants (small changes in DNA that modify biological functions over time). “These might not directly cause disease,” she said, “but they can predispose you to illness when combined with environmental exposures or certain lifestyle factors.”



Sal’s Motivation: Personal Health and Family Legacy

Sal expressed his dual motivation for undergoing testing. “It’s really fascinating to see what you would pass on to your daughter or your son,” he said. “But the genomics part is interesting because you kind of see what works with you personally.”

Dr. Kline reassured him that it wasn’t an either-or decision. “It’s just so I can put together a package that is personalized for you,” she explained, adding that both inherited and acquired risk factors would be considered.

A FAMILY AND OCCUPATIONAL HISTORY OF CONCERN

Sal detailed his family health history, noting his father's chronic lymphocytic leukemia (CLL), multiple relatives with brain cancer, and a pattern of autoimmune conditions on his mother's side. "I was thinking about this because it came up not too long ago," Sal said, clearly aware of the value of this information.

Of equal concern was his occupational exposure. Sal recounted his experience at Ground Zero after 9/11. "That night, just sitting there handing back in that pile with all the toxins, it actually became very difficult to breathe," he recalled. "It was a clear night, but it became difficult to try to breathe sometimes." When asked about protective gear, Sal's answer was sobering: "Not a mask. Not even an N95." He described how some firefighters wore what was available, but nothing adequately addressed the toxic exposures they faced.



Why Genomics Matters for Toxin Response

Dr. Kline explained why genomics was so relevant for Sal and his fellow first responders. "You can have two firefighters exposed to the same conditions. One gets health issues and the other doesn't," she said. "A lot of that is because of their genes. How your body processes toxins, repairs DNA, and controls inflammation — these are all things we can look at through genomics."

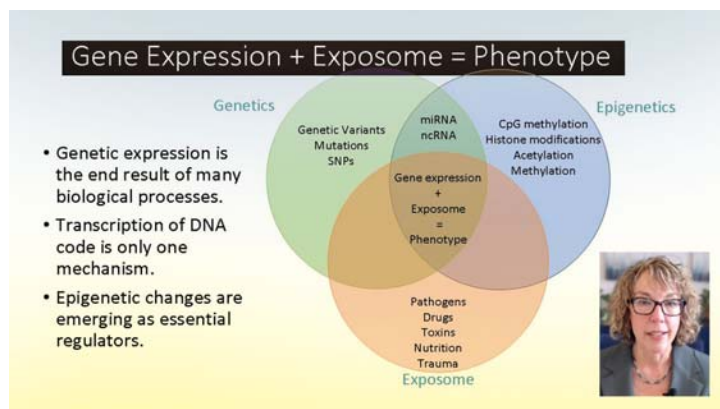
Though traditional toxin tests might be ineffective so long after exposure, genetic insights could reveal Sal's susceptibility to long-term damage from those exposures and provide a proactive roadmap for future care.

Pharmacogenomics: Tailoring Treatments to Your DNA

Sal's interest in how genomics could guide future treatments led to a discussion on pharmacogenomics. "That's a really good question," Dr. Kline said when Sal asked if genomics could predict treatment responses.

She explained that pharmacogenomics examines how DNA affects drug metabolism. "We can cover close to 200 medications, including over-the-counter and prescription drugs, and see if you might be predisposed to a medication being toxic or ineffective for you."

Sal was visibly enthusiastic. "I'm excited," he admitted. "I've been dying to meet you and do this."





Collection 9/11 Memorial Museum, Roberto Rabanne Archive. Photograph by Roberto Rabanne

A Health Blueprint for Firefighters

The consultation also touched on using genomics proactively for active-duty firefighters. Sal, acting as an ambassador for his peers, asked if the testing could be extended to others still serving.

Dr. Kline affirmed its value. “The genomics is helpful no matter what because it gives you a heads-up as to

what your predispositions are,” she said. She added that firefighters could also periodically test toxin levels through simple urine samples to monitor exposure. “If they have predispositions, they may need to take additional steps beyond standard protective gear.” Sal reflected on the practical value: “It’s like getting a baseline for yourself, knowing where you stand, and having another tool in your toolbox.”

Respecting the Individual While Serving the Community

Throughout the consultation, Dr. Kline emphasized the importance of tailoring the testing package to Sal’s specific needs. “The reason I always have this conversation before deciding what test to order is that I want to make sure whatever you’re investing in is going to have value for you,” she said.

Sal recognized the potential for the larger firefighting community. “The medical field is using this more and more,” he observed. “And it seems like the variation is so much, you need someone skilled to narrow it down for you and then tailor a treatment plan.”

A Roadmap for the Future

The consultation closed on a hopeful note. Dr. Kline offered other testing options for Sal, and to prepare a personalized health plan based on his results. Sal, clearly moved by the experience found this process to be of great value to anyone with deep concerns for their health- especially after a career in the fire service. Dr. Kline concluded the meeting by capturing the promise of precision medicine; “I think you’ll find this really amazing and very informative. It’s like having a blueprint you can pull out when you need it most.”

Conclusion

This consultation between Dr. Roberta Kline and Sal Banchitta did more than address one man’s health concerns. It demonstrated the practical, life-enhancing potential of integrating imaging, genetics, and genomics for personalized, preventative healthcare — especially for occupational communities like first responders. Their conversation also highlighted the importance of advocacy, education, and individualized care within a profession where exposures are unavoidable and risks high. For Sal, it marked the start of a proactive health journey, not only for himself but for the firefighting community he still proudly serves.



Cousin Sal stands on the grounds of what used to be called 'THE PILE'. Today, he is an advocate for all first responders to “Get Checked” for the many cancers that have yet to surface from 9/11 exposures.