

September 1, 2016

The “Mystery of the Devious Defecator”

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The Genetic Information Nondiscrimination Act (GINA) was passed in 2008 to prevent the “misuse of genetic information to discriminate in health insurance and employment”. The act states that it is unlawful for an employer “to request, require, or purchase genetic information with respect to an employee”.

Seven years after its birth, a case involving GINA went to trial for the first time, dubbed the “mystery of the devious defecator” by the presiding judge, Amy Totenberg.

Human feces had been found around a warehouse in Atlanta. The company that owned the warehouse requested cheek swabs from several workers and sent these to a forensics lab to see if the DNA matched the fecal DNA. No match was found, but two of the workers sued the company in violation of GINA. The judge ruled in favor of the workers and the workers were awarded \$2.25 million in damages.

The key issue in the case was whether the DNA analysis conducted on the cheek swab samples constituted “genetic information”. The company’s lawyers argued that because the DNA sample was used purely for identification, not for obtaining medical information, GINA did not apply. The forensics lab used technology to identify regions called “short tandem repeats” (STRs) which are located between genes. These repeat regions are highly variable from individual to individual and are therefore effective at identification. The genetic tests that are generally used for medical screens do not use this technology.

However, the wording in GINA does not make a distinction between genetic information for the sake of identification versus for obtaining medically relevant information. The act states:

“genetic test” means an analysis of human DNA, RNA, chromosomes, proteins, or metabolites, that detects genotypes, mutations, or chromosomal changes.

In the act, genetic information is defined as information about an individual’s genetic test. Under this definition, the analysis conducted by the forensics lab, which looks at differences in STR genotypes, constitutes a genetic test.

In news articles about this case, legal experts felt this was a rather broad interpretation of GINA. It was also an unexpected application of the law. Nevertheless, one could argue that because the workers were submitting DNA in general, they could not be sure that their genetic information would not be misused. This is precisely the situation GINA protects individuals against. Moreover, it is possible that in the future, DNA tests that are used for identification might also contain information about an individual’s disease risk.

References:

Genetic Information Nondiscrimination Act: <https://www.eeoc.gov/laws/statutes/gina.cfm>

Court decision: *Lowe v. Atlas Logistics Group Retail Services*, 102 F. Supp. 3d 1360 (N.D. Ga. 2015).

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