Penn Medicine

CLINICAL BRIEFING™

Abramson Cancer Center • Telegenetics Program

Remote Access Genetic Counseling for Patients in the Community Setting

The Abramson Cancer Center Telegenetics Program is now providing genetic counseling via remote synchronous video conferencing to patients in community settings where genetic services are not available. Genetic testing for cancer susceptibility is now an essential component of oncology care, increasing the need for genetic counseling specialists to assist in the care of patients and their families. Genetic counseling offers patients the advantage of genetic information to empower them to make informed decisions for their personal health care.

With few exceptions, access to genetic counseling in the United States is limited to larger cities and academic medical centers. Recent studies suggest that fewer than half of patients in community settings, including the Philadelphia region, ever meet with a genetic counselor.[1] In developing its Telegenetics Program to address this pressing need, the Abramson Cancer Center has realized an expanded role for telemedicine that, in the words of a 2015 position statement from the American College of Physicians, "enhance patient–physician collaborations, improve health outcomes, increase access to care and members of a patient's health care team, and reduce medical costs when used as a component of a patient's longitudinal care."

Studies of telegenetics programs have been generally positive. A recent systematic literature review, for example, found that the satisfaction levels of those receiving telegenetics services were generally no different from those in the group receiving face-to-face counseling. Moreover, patients reported high levels of satisfaction with the benefits of these programs, including convenience, reduced travel time and associated costs, and reduced waiting times to see a genetics specialist.[2]

About the Penn Telegenetics Program

The Penn Telegenetics Program has a relatively simple algorithm. Partnering sites and physicians in the community offer a secure videoconferencing connection to a Penn genetic counselor in a private setting. When a physician in the community determines that a patient might benefit from genetic counseling, the patient is offered the opportunity to participate in a pre-test session with a Penn Telegenetics counselor. The benefits of genetic counseling may include personal assessment for inherited risk factors, discussion of genetic testing options and outcomes, education on early detection and risk-reduction options, as well as addressing the patient's psychosocial concerns.

During the pre-test session, the patient's personal and family history of cancer is reviewed and options for genetic testing and cancer risk reduction are discussed. The Penn genetic counselor then works with the patient and a site-designated coordinator—typically a local physician or nurse—to facilitate the patient's desired course of action, such as ordering genetic testing for hereditary cancer syndromes. In this way, the patient is better able to make informed personal care decisions.

Figure 1: The Penn Telegenetics Program provides remote access to genetic counselors at Penn Medicine for patients in community practices who might not otherwise have access to genetic counseling services.

If the patient chooses to test for a potential genetic mutation, a sample of blood or saliva is subsequently collected at a local site and transferred directly to a genetic testing lab for analysis. The results of testing are then sent to the Penn genetic counselor, who consults with members of the Penn Telegenetics Program and the participating local team to develop next steps for the patient.

The patient is then contacted to schedule a one-on-one result disclosure appointment with the genetic counselor. This session is important to ensure that the patient understands the test results and the implications these results may have on planning for the patient's clinical care and for family members. At the conclusion of the appointment, nurses and physicians at the community site assist the patient with future directions for care.

When a Test is Positive for Genetic Mutation: Implications for the Family

If a hereditary genetic cause is identified in a patient, family members are advised to consider genetic testing to determine if they, too, inherited the same genetic cause. Such knowledge allows family members to take advantage of early detection screening and possible medical options for risk-reduction. Even if a hereditary genetic cause is not found, family members may benefit from additional counseling to better understand the family history risks and take advantage of the most appropriate screening options available.

References

1. Klitzman, et al. J Genet Couns. 2013; 22: 90–100.
2. Hilgart JS, et al. Genet Med 2012:14:765–776.

Partnering with the Abramson Cancer Center Telegenetics Program

Originating at the Abramson Cancer Center, the Penn Telegenetics Program was created when a research feasibility study of genetic counseling for underserved populations was continued at the request of the sites involved. The Telegenetics Program remains a source for clinical investigation, including the Alzheimer's Prevention Initiative APOE4 Trial, and now offers remote cancer genetic services to several states for patients at-risk.

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ACCESS

For all clinical partnership and research inquiries with the Telegenetics Program, or to discuss your needs for genetic counseling, please contact us at **215.662.4303** or email **Demetrios.Ofidis@uphs.upenn.edu**.

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