UT Southwestern
Harold C. Simmons
Comprehensive Cancer Center

NCI Designated Comprehensive Cancer Center

MET Mutations

What you should know about *MET* mutations

Individuals with a mutation in the *MET* gene have a condition called hereditary papillary renal cell carcinoma (HPRCC), which causes an increased risk of developing papillary renal cell carcinoma. The *MET* gene encodes a receptor to hepatocyte growth factor, which means that this gene is important for healthy kidneys.

Cancer risks associated with a MET mutation

Mutations in the MET gene increase an individual's risk to develop a certain type of kidney cancer called type 1 papillary renal cell carcinoma. This type of kidney cancer occurs in the lining of parts of the kidney called renal tubules. The tumors associated with this gene are typically bilateral (occurring in both kidneys) and multifocal (tumors occurring a more than one site within the kidney).

Risks to family members

Mutations in the *MET* gene are inherited in an autosomal dominant fashion. This means that children, brothers, sisters, and parents of individuals with a *MET* mutation have a 1 in 2 (50%) chance of having the mutation as well. Both males and females can inherit a familial *MET* mutation and can pass that it on to their children.

Managing cancer risks

There is no consensus on how to best manage individuals with MET mutations, and screening may depend on genetic factors, individual medical history and the family history of cancer. Imaging studies, such as CT, MRI or ultrasound may be recommended. Individuals with *MET* mutation should discuss their risks and management options with a healthcare provider familiar with HPRCC.

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