UNDERSTANDING THE ROLE OF BRAF MUTATIONS IN METASTATIC MELANOMA

Melanoma is a form of skin cancer that develops when unrepaired DNA damage to skin cells triggers mutations that may lead them to multiply and form “malignant,” or cancer-causing, tumors.¹

Approximately 1 person dies from melanoma EVERY HOUR²

1 MILLION people in the United States are estimated to be living with melanoma.³

91,270 Americans will be diagnosed with melanoma in 2018.⁴

The incidence of melanoma has MORE THAN DOUBLED in the past 40 years.⁵

Metastatic melanoma is the most serious and life-threatening type of skin cancer and is associated with low survival rates.³,⁴

BRAF-Mutant Metastatic Melanoma

BRAF

A variety of genetic mutations can lead to metastatic melanoma, but the most common is BRAF.¹,⁵

~50% of metastatic melanoma cases have the BRAF GENE MUTATION, a key target in the treatment of metastatic melanoma.⁵

Role of BRAF and the MAPK Signaling Pathway

The majority of melanomas have mutations associated with the mitogen-activated protein kinase (MAPK) pathway, which is involved in cancer cell growth, differentiation and survival.⁵

RAS → RAF → MEK → ERK

Uncontrolled proliferation, survival, invasion, metastasis

BRAF and MEK are key protein kinases in the MAPK signaling pathway (RAS-RAF-MEK-ERK). Clinicians target this pathway to treat advanced melanoma.⁶

Targeted therapy with BRAF and MEK inhibitors has evolved to become a standard of care for patients with advanced or metastatic BRAF-mutant melanoma.⁷


