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The cover features a genetically engineered mouse (GEM; photo courtesy of Takeshi Shimamura). Genetic engineering in mice to conditionally activate oncogenic Kras with or without the conditional loss of the tumor suppressor Lkb1 induces non-small-cell lung carcinogenesis. The Lkb1/Kras, Kras and other GEM models are valuable tools for preclinical tests of novel agents for the prevention and treatment of lung cancers. Lkb1/Kras mice are a novel model of metastatic lung cancer; lung cancer in Kras mice does not metastasize. These GEM models provide platforms to assess the impact of targeted agents on angiogenesis and the tumor-microenvironment interaction, which cannot be assessed or recapitulated easily in xenograft or in vitro models. Treatment or chemoprevention studies can be initiated and performed on these mice at specific time points in the genetically engineered oncogenic process. The multi-targeted (e.g., VEGFR) tyrosine kinase inhibitor sunitinib can repress and prevent tumors in both models, although it did not affect metastases in the Lkb1/Kras model. See articles by Gandhi et al. (beginning on page 330) and Grandis and Argiris (beginning on page 291) for more information.