# Clinical Trials Data KIT - Document 32

# Tyrosine Kinase Inhibition to Treat Myeloid Hypereosinophilic Syndrome

## Clinical Trial: https://clinicaltrials.gov/study/NCT00044304

"eligibilityCriteria": "\* INCLUSION CRITERIA:\n\nIn order to be eligible to participate in this study, an individual must meet all of the following criteria:\n\n1. Male or female, at least 2 years of age for imatinib therapy and \\>=18 years of age for ruxolitinib therapy.\n2. Documented diagnosis of HES: eosinophilia \\>1,500/mm\\^3 on two occasions, no secondary etiology for the eosinophilia despite careful clinical evaluation, and evidence of end organ damage (histologic evidence of tissue infiltration by eosinophils and/or objective evidence of clinical pathology in any organ system that is temporally associated with eosinophilia and not clearly attributable to another cause).\n3. All participants must fit one of the following four categories:\n\n 1. Myeloid neoplasm associated with a PDGFRA or PDGFRB rearrangement.\n 2. Myeloid neoplasm associated with rearrangement or mutation involving the JAK-STAT pathway.\n 3. Presence of \\>=4 of the following laboratory criteria suggestive of a myeloid disorder:\n\n \* Dysplastic eosinophils on peripheral smear\n \* Serum B12 level \\>= 1000 pg/mL.\n \* Serum tryptase level \\>= 12.\n \* Anemia and/or thrombocytopenia.\n \* Bone marrow cellularity \\> 80% with left shift in maturation.\n \* Dysplastic (spindle-shaped) mast cells on bone marrow biopsy.\n \* Evidence of fibrosis on bone marrow biopsy.\n \* Dysplastic megakaryocytes on bone marrow biopsy.\n 4. Refractory to or intolerant of steroids without evidence of a myeloid disorder.\n4. Negative serum beta-human chorionic gonadotropin 24 hours prior to drug administration for women of childbearing potential to exclude early pregnancy.\n5. Agrees to practice abstinence or effective contraception during administration of imatinib mesylate or ruxolitinib and for 6 months after discontinuation of the drug. Women of childbearing potential who are using hormonal contraceptives and taking ruxolitinib will also be required to use a barrier method.\\\*\\\*\n6. Participation in protocol 94-I-0079 (Activation and function of eosinophils in conditions with blood or tissue eosinophilia).\n\nNOTE: Participants who meet inclusion criteria but are already receiving imatinib, may be enrolled in the dose de-escalation portion of the study at the investigator s discretion. Patients who meet inclusion criteria but are already receiving ruxolitinib may be enrolled at the investigator s discretion if baseline data are available and they have received ruxolitinib at the dose specified in the protocol for less than 2 months (primary endpoint).\n\n\\\*\\\*Effective contraception includes the use of hormonal (birth control pills, for example) and/or barrier (condoms and diaphragms, for example) methods by participants and/or their partners to prevent pregnancy in women of childbearing potential. For women of childbearing potential who use hormonal methods as their primary means of contraception and will be receiving treatment\n\nwith ruxolitinib, barrier methods will also be required due to possible interference of ruxolitinib with hormonal contraceptives.\n\nAlthough a private physician is not required for inclusion in the study, it is strongly recommended that all participants have a physician outside the NIH for routine medical care and emergencies.\n\nEXCLUSION CRITERIA:\n\nAn individual who meets any of the following criteria will be excluded from participation in this study:\n\n1. Pregnant or nursing women.\\\*\n2. D816V KIT-positive systemic mastocytosis\n3. Uncontrolled HIV infection (absolute lymphocyte count \\<200/mm\\^3 and/or HIV RNA level \\>500 copies/ml)\n4. ANC \\<1000/mm\\^3 or platelet count \\<10,000/mm\\^3 or \\<50,000/m\\^3 with clinical evidence of bleeding.\n5. Elevated transaminases (\\>5 times the upper limit of normal) or elevated bilirubin (\\>3 times the upper limit of normal).\n6. Any condition that, in the investigator s opinion, places the patient at undue risk by participating in the study.\n\nAn individual who meets any of the following criteria will be excluded from participation in the ruxolitinib treatment arm of this study:\n\n1. Evidence of B-cell clonality by PCR or flow cytometry.\n2. Active tuberculosis, or acute or chronic active infection with hepatitis B or C\\\*.\n3. Treatment with fluconazole \\>200 mg daily.\n\n \* Participants with active tuberculosis will be excluded. The most current Infectious Diseases Society of America guidelines will be followed regarding isoniazid therapy for latent tuberculosis. Participants who refuse recommended prophylactic therapy for tuberculosis will be counseled regarding the risks of reactivation of tuberculosis during ruxolitinib therapy but will not be systematically excluded. Molecular and serologic tests for hepatitis B and serology for hepatitis C will be performed regardless of vaccination history. Participants with evidence of active or chronic infection with hepatitis B or positive hepatitis C serology will be excluded from participation in the ruxolitinib arm of the protocol. Specifically, a positive hepatitis B serology indicative of previous immunization (i.e., hepatitis B anti-surface antibody-positive and hepatitis B anti-core antibody-negative) or a fully resolved acute hepatitis B infection is not an exclusion criterion. Patients with an indolent chronic hepatitis B infection (normal alanine aminotransferase \\[ALT\\], aspartate aminotransferase \\[AST\\], and albumin, and no radiographic or biopsy evidence of cirrhosis) will be evaluated by an NIH hepatologist and may be eligible. Patients who choose to remain on study with evidence of prior hepatitis B infection will be counseled regarding the risks of reactivation prior to initiation of ruxolitinib therapy.",  
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 "sex": "ALL",  
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"CHILD",  
"ADULT",  
"OLDER\_ADULT"  
]

Question:  
Based on the following clinical trial information, would a patient with a KIT gene mutation be eligible for the clinical trial?

Answer:  
Based on the provided eligibility criteria for the clinical trial, a patient with a KIT gene mutation would be eligible for the trial unless they have D816V KIT-positive systemic mastocytosis. This is explicitly listed as an exclusion criterion. Therefore, if the patient's KIT mutation is not D816V and does not involve systemic mastocytosis, they may still be eligible, provided they meet all other inclusion criteria and do not meet any other exclusion criteria.