# TNF-alpha Inhibitor Use in the Setting of Undiagnosed HIV Infection: A Call for Enhanced Screening Guidelines

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## BACKGROUND

- Both HIV infection and pharmacologic immunosuppression carry potential risks of infections, malignancies, and adverse clinical outcomes.
- Among patients with well-controlled HIV, limited data support the safety and effectiveness of using TNF-alpha inhibitors (TNF-I), such as infliximab and adalimumab, to treat chronic inflammatory conditions like rheumatoid arthritis, psoriasis, and inflammatory bowel disease.
- Little is known about patients with undiagnosed HIV infection who might be started on TNF-I.
- Several other countries recommend screening for risk factors for HIV acquisition and testing patients at high risk prior to starting TNF-I.
- No current guidelines exist in the U.S. for screening high-risk populations prior to TNF-I.

## METHODS

2 Large Academic Centers in San Francisco → 78 Patients with HIV+ and Immunosuppression → 3/78 on TNF-I before known HIV+ Test

## CONCLUSIONS

- All 3 patients had well-known risk factors for HIV infection.
- Patients 1 and 3 had final diagnoses attributable to chronic HIV infection, without TNF-I indication.
- Patient 2 has poor symptom control despite excellent response to ART and may benefit from TNF-I.
- Screening for HIV infection and risk factors prior to the initiation of biologic therapy should be incorporated into clinical practice guidelines.

## CASE SERIES

| Patient Demographics | Risk Factor for HIV Acquisition | Immunosuppressant (Duration before HIV+ test) | Indication for Immunosuppression | HIV Status | CD4, HIV VL | Subsequent Events | Immunosuppression Course | Outcome |
|---|---|---|---|---|---|---|---|---|
| Patient 1: 53M Remote SUD |  | **MTX** (11 months)<br>**IFX** (9 months)<br>Leflunomide (4 months) | **Rheumatoid Arthritis**<br>Symmetric peripheral arthritis, not controlled by MTX | Why tested:<br>**Flu-like symptoms** (recurrent)<br>Last negative test: 18 months prior | **CD4 nadir: 859**<br>**VL: 6,000→ undetectable** | • Recurrent shingles<br>• Candidal infections<br>• Gonococcal urethritis<br>• Celiac disease | Continued IFX+MTX 5 months after HIV+, stopped due to recurrent infections | Symptoms resolved with ART<br>Unifying diagnosis = **HIV arthropathy** |
| Patient 2: 55F COPD, CKD |  | **IFX** (1 year)<br>**MTX** (1 year) | **Hidradenitis Suppurativa**<br>Inguinal, axillary LAD, on hibiclens washes | Why tested:<br>**50-pound weight loss**<br>Last negative test: None | **CD4 nadir: 87**<br>**VL: 276,000→ undetectable** | • *C. difficile* colitis requiring ICU, 1 year later<br>• Recurrent SSTI → surgical excision | IFX/MTX stopped after HIV+ diagnosis | Symptoms inadequately controlled with local Kenalog injections |
| Patient 3: 32M Healthy |  | **IFX** (2 months)<br>Prednisone (2 months) | **Crohn's Disease**<br>Perianal abscesses, acute rectal inflammation | Why tested:<br>**Incident Kaposi Sarcoma (KS)**<br>Last negative test: None | **CD4 nadir: 248**<br>**VL: 3,000→ undetectable** | • Extensive visceral and cutaneous KS c/b IRIS<br>• CMV colitis<br>• Recurrent pericolic abscesses<br>• Rectal stricture | IFX stopped at HIV+, with slow wean of Prednisone limited by abd pain, bloody diarrhea | Symptoms improving with Doxorubicin<br>No Crohn's Disease on follow-up endoscopy<br>Unifying diagnosis = **Cutaneous and visceral KS** |

SUD: Stimulant Use Disorder; MTX: Methotrexate; IFX: Infliximab; VL: Viral Load; CMV: Cytomegalovirus; LAD: lymphadenopathy; SSTI: Skin & Soft Tissue Infections; KS: Kaposi Sarcoma; c/b: complicated by; IRIS: Immune Reconstitution Inflammatory Syndrome

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