

# Pap Smear Cell Patterns May Signal Bone Loss

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HARROGATE, ENGLAND — Women whose Pap smears reveal atrophic cell patterns may be at greater risk for osteopenia and osteoporosis than women whose smears show mature cell patterns, a study has shown.

The findings suggest that routine Pap testing could be a useful and inexpensive screening tool for identifying women

who are at risk for the degenerative bone disorders, Alenka Repse-Fokter, M.D., reported in a poster presentation at the annual conference of the National Osteoporosis Society.

Given limited medical resources, the ability to use an already existing and widely performed screening protocol to help identify women with osteoporosis "would be highly appreciated," she said.

Dr. Repse-Fokter and colleagues at Celje (Slovenia) General Hospital assessed

the Pap smear results and dual-energy x-ray absorptiometry (DXA) bone density measurements of 66 women between 46 and 67 years old.

The women had received the Pap smears for routine cervical cancer screening and were invited to undergo bone mineral density measurement as part of the investigation.

None of the women used hormonal contraception or hormone therapy, Dr. Repse-Fokter said.

The investigator and her associates grouped the smears into atrophic and mature cell patterns, which can be easily recognized during the screening for cervical dysplasia or cancer.

"In routine light microscopy, atrophic cells appear much smaller than cells in mature smear patterns," she noted.

The smear patterns were then compared with the patients' T values measured by DXA on the femoral neck and lumbar spine.

# CONFIDENCE



\*Data reported at 6 months for patients in Study 1 who received placebo or HUMIRA 40 mg every other week (eow) plus MTX (12.5 to 25 mg).

<sup>†</sup>Defined by a change in Total Sharp Score (TSS) A0 in open-label extension of Study 3 at 2 years. Patients received placebo or HUMIRA 40 mg eow plus MTX (12.5 to 25 mg).

<sup>‡</sup>Among patients on HUMIRA with B0.5 improvement in HAQ-DI at week 52 (Study 3).

**HUMIRA** is indicated for reducing signs and symptoms, inhibiting the progression of structural damage and improving physical function in adult patients with moderately to severely active rheumatoid arthritis who have had an inadequate response to one or more

DMARDs. **HUMIRA** can be used alone or in combination with MTX or other DMARDs.

#### Important Treatment Considerations

**TUBERCULOSIS (TB) AND INVASIVE OPPORTUNISTIC FUNGAL INFECTIONS HAVE BEEN OBSERVED IN PATIENTS TREATED WITH TNF-BLOCKING AGENTS, INCLUDING HUMIRA. PATIENTS SHOULD BE EVALUATED FOR LATENT (INACTIVE) TB WITH A SKIN TEST. TREATMENT OF TB SHOULD BE INITIATED PRIOR TO THERAPY WITH HUMIRA. THE BENEFITS AND RISKS OF HUMIRA SHOULD BE CAREFULLY CONSIDERED BEFORE INITIATION OF TREATMENT FOR PATIENTS WHO HAVE RESIDED IN REGIONS WHERE TB OR HISTOPLASMOSIS IS ENDEMIC.**

**SERIOUS INFECTIONS AND SEPSIS, INCLUDING FATALITIES, HAVE BEEN REPORTED WITH THE USE OF TNF-BLOCKING AGENTS, INCLUDING HUMIRA. MANY OF THESE INFECTIONS OCCURRED IN PATIENTS PREDISPOSED TO INFECTIONS BECAUSE OF CONCOMITANT IMMUNOSUPPRESSIVE THERAPY IN ADDITION TO THEIR UNDERLYING DISEASE. PATIENTS WHO DEVELOP A NEW INFECTION WHILE USING HUMIRA SHOULD BE MONITORED**

Overall, the T scores were significantly lower in the atrophic smear group. Of the 33 women with atrophic smears, 13 had osteopenia and 15 had osteoporosis. Among the 33 women whose smears showed mature cell patterns, 9 had osteopenia and 24 had normal bone density, Dr. Repse-Fokter said.

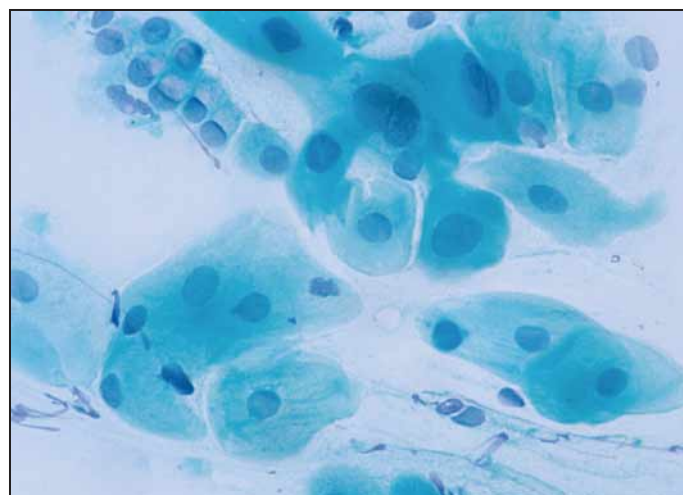
The sensitivity, specificity, and positive predictive value of the findings were, respectively, 76%, 83%, and 85%.

The findings of a correlation between smear patterns and degenerative bone disease support the investigators' findings from a previous study that revealed a highly significant association between atroph-

ic smear patterns and low bone mineral density.

"This means that a significant number of women with low bone mineral density who are at high risk [for osteoporotic disease] could be identified in parallel with routine Pap testing for cervical cancer screening without added costs," Dr. Repse-Fokter said.

Although further studies on larger populations are needed, "we strongly suggest that women with atrophic Pap smear patterns be closely followed as recommended by the American National Osteoporosis Foundation," according to Dr. Repse-Fokter and her colleagues. ■



Atrophic cells are characterized by a progressive degeneration and wasting of the cells, as seen in this Pap smear.

## B u i l t o n R e s p o n s e

### Clinical response

- Significant improvement in ACR response rates<sup>2</sup>
  - ACR 20, 50, and 70 with HUMIRA/MTX vs placebo/MTX: 65%, 52%, and 24% vs 13%, 7%, and 3% ( $P < 0.01$ )\*

### Radiographic response

- Significant inhibition of disease progression<sup>2</sup>
  - 54% of patients had no progression of structural damage<sup>†</sup>

### Physical function response

- 82% of patients<sup>‡</sup> maintained improvements in HAQ-DI at 2 years<sup>2</sup>



# HUMIRA<sup>®</sup>

## (adalimumab)

**CLOSELY. TREATMENT SHOULD BE DISCONTINUED IF A PATIENT DEVELOPS A SERIOUS INFECTION. DO NOT START HUMIRA IN PATIENTS WITH ACTIVE INFECTION (INCLUDING CHRONIC OR LOCALIZED), OR ALLERGY TO HUMIRA OR ITS COMPONENTS. EXERCISE CAUTION IN PATIENTS WITH A HISTORY OF RECURRENT INFECTION OR WITH UNDERLYING CONDITIONS, WHICH MAY PREDISPOSE PATIENTS TO INFECTIONS.**

**The combination of HUMIRA and anakinra is not recommended.** TNF-blocking agents, including HUMIRA, have been associated in rare cases with exacerbation of demyelinating disease. Exercise caution when considering HUMIRA for patients with these disorders. Lymphoma has been observed in patients treated with TNF-blocking agents. The role of TNF-blocking agents in the development of malignancy is not known.

Anaphylaxis has been reported rarely following HUMIRA administration. Rare reports of pancytopenia including aplastic anemia have been reported with TNF-blocking agents. Medically significant cytopenia (e.g. thrombocytopenia,

leukopenia) has been infrequently reported with HUMIRA. The causal relationship of these reports to HUMIRA remains unclear. Worsening congestive heart failure (CHF) has been observed with TNF-blocking agents, including HUMIRA, and new onset CHF has been reported with TNF-blocking agents.

Most frequent adverse events vs placebo from placebo-controlled studies were injection site reactions (20% vs 14%), upper respiratory infection (17% vs 13%), injection site pain (12% vs 12%), headache (12% vs 8%), rash (12% vs 6%), and sinusitis (11% vs 9%). Discontinuations due to adverse events were 7% for HUMIRA vs 4% for placebo.

**References:** 1. Data on file, Abbott Laboratories. 2. HUMIRA Prescribing Information. Abbott Laboratories. July 2004.

**Please see brief summary of prescribing information on adjacent page.**