**Who Knew: Knee Damage Progresses Symmetrically**

BY DAMIAN McNAMARA

Miami Bureau

**FORT LAUDERDALE, Fla. —** Symmetrical bilateral progression of knee osteoarthritis was a surprising result of a genetic study of hand osteoarthritis patients and their relatives.

“The most surprising [finding] was that progression occurred in a similar manner on both sides. This indicates to me that there is probably a strong genetic factor for progression,” Dr. Virginia Byers Kraus said in an interview during a poster session at the World Congress on Osteoarthritis, Os
teoarthritis Research Society International.

Dr. Byers Kraus and associates studied 1,333 hand osteoarthritis patients for a median of 3.8 years. Participants whose osteoarthritis progressed in the medial compartment of one knee were significantly more likely to progress in the medial compartment of the other. The same held true for lateral compartment progressions.

“If you see these individuals [with hand OA], if they have an affected knee, the other knee is likely to have hand osteoarthritis and they are likely to progress in parallel,” said Dr. Byers Kraus, an internist in the division of rheumatology, Duke Universit

ty Medical Center, Durham, N.C. “It’s a probable prognostic factor for patients.”

The cohort came from the Genetics of Generalized Osteoarthritis (GOGO) study. A total of 79% were women and the mean age was 69 years. Researchers scored baseline and follow-up radiographs for changes in Kellgren-Lawrence grade, minimal joint space, presence of osteophytes, and joint space narrowing of the medial and lateral compartment.

The results may also have research implications. In studies of OA patients who don’t progress, it’s hard to assess the efficacy of a treatment. “This was responsible for a lot of clinical litigation,” Dr. Byers Kraus said. His team’s research could have a major impact on the cost of care. “If we could identify patients who are likely to progress, we could target interventions more efficiently,” he said.

**New Osteoarthritis Research Targeting Bone, Not Cartilage**

BY BETSY BATES

Los Angeles Bureau

**BEVERLY HILLS, Calif. —** New ideas about the causes of osteoarthritis may lead to targeted therapeutic advances like those currently available for rheuma
toid arthritis, Dr. Steven R. Ytterberg said at the annual meeting of the American Association for Hand Surgery.

The first conceptual shift is the notion that osteoarthritis probably is not a disease, but a clinical and pathologic outcome arising from a range of disorders, explained Dr. Ytterberg, a clinical rheuma
tologist and researcher at the Mayo Clin

ic, Rochester, Minn.

He noted wide disparities in the character
tistics of primary vs. secondary osteoarthritis; localized, single-joint disease vs. generalized osteoarthritis; and osteoarthritis associated with osteophytes necrosis, inflammation, or crystal depo

sition. Dr. Ytterberg compared, for in

stance, inflammatory, erosive osteo

arthrosis of the hands with diffuse id
dopathic skeletal hyperostosis (DISH).

“Is this all the same disease? I don’t know that it makes sense that it is,” he said.

Another major shift is in the way re

searchers are studying development of osteoarthritis.

“With osteoarthritis, the focus has al

ways been on cartilage. To begin to see frayed cartilage through the arthroscope has always been presumed to be where the action is.”

Microscopic disruption of the extra
cellular matrix and, later, macroscopic
clefts in the cartilage were seen as pro

gressive evidence of encroaching disease.

Now, the focus has shifted, and the tar
get of research is bone. “A large amount of information is now calling attention to what’s going on in the chondrocytes: potential changes in cell-signaling path

yways,” he said.

Many researchers are now beginning to believe that “subchondral bone is where the problem is,” with cartilage abnormalities perhaps the downstream ef

fect of abnormal subchondral bone changes, said Dr. Ytterberg.

Others are pursuing the hypothesis that osteoarthritis is an enthesopathy. “These theories would fit well in their infamy, could one day help characterize a diffusely defined symptom set that may or may not have common origins, he said.