THE
Arthritis Research
NEWSLETTER

January 2002

ONLINE AT LAST...

This year, for the first time, the National Data Bank (NDB) is going on the Internet. A number of you have written to us asking about filling out questionnaires electronically, and we have finally pulled together all the pieces to make it work.

How to participate. In December we sent an email to all of you who had given us your email address. In the email we gave you a place to click on (a URL). When you do that the computer will take you directly to our web site where you can fill out your questionnaire.

If you didn't receive an email from us and would like to complete the questionnaire on the web rather than using the paper form, please check our website www.arthritis-research.org for instructions on how to access it.

Important concerns about your privacy. The questionnaire and email process is absolutely private and secure. We will never give your email address to anyone. Never means never. When you access our web site you will do so with a special code we will send to you. Only you will have that code and therefore only you can see your data. For those of you who still may have concerns, we have installed a full range of security measures so that no one can break into the web site and get at the data.

When you use the web questionaire, all of the information that we have about you that doesn't usually change will be on your screen. You won't have to enter it again.

The advantage of web entry. It's easier and faster. Here's why...

Advantage 1: When you use the web questionnaire, information that we have about you that doesn't usually change will be on your screen. You won't have to enter it again unless it needs to be updated or corrected.

Advantage 2: Depending on your answers, the computer program will skip unnecessary questions. The result is an easier, faster questionnaire.

Advantage 3: Although it's best to complete the questionnaire at one sitting, if you want to stop and come back, our computers will remember where you left off and start up again at that same place.

Advantage 4: Using a mouse or keyboard is usually easier than writing. This results in a faster, easier questionnaire too.

If you have questions we will be available to support you. Please email us at info@arthritis-research.org, or call us at 800-323-5871 if you have any questions. Still, not everyone finds computers to be fun. So if you prefer the paper questionnaires, please continue to use them.

KINERET® APPROVED BY FDA AND RELEASED FOR RA TREATMENT

In November 2001 the US Food and Drug Administration (FDA) approved a new class of drug for the treatment of rheumatoid arthritis (RA). Kineret® (generic name: Anakinra) is an IL-1 receptor antagonist. IL-1 is a body chemical (cytokine) that is a key element in RA inflammation. When released, IL-1 attaches itself to a *receptor* on cells in joints and other sites and causes the pain, swelling and laboratory changes that are seen in RA as shown in Figure 1. Under ordinary circumstances the body has another compound that keeps IL-1 under control, a substance called IL-1 receptor antagonist (IL-1ra). IL-1ra works by filling the receptor sites on cells so that IL-1 cannot attach to the cells and cannot cause inflammation.

Kineret is a man-made IL-1 receptor antagonist. When injected in the body, Kineret fills the IL-1 receptor sites and thereby prevents IL-1 from causing RA inflammation. IL-1 and TNF-∝ work in similar ways to cause inflammation, but Remicade® and Enbrel® block TNF-∝ and Kineret blocks IL-1. When used for rheumatoid arthritis, clinical trials in more than 2,932 persons have shown that Kineret regularly reduces pain, swelling and inflammation. Interestingly, Kineret also appears to slow down bone deterioration and to retard RA changes that can be seen on X-rays.

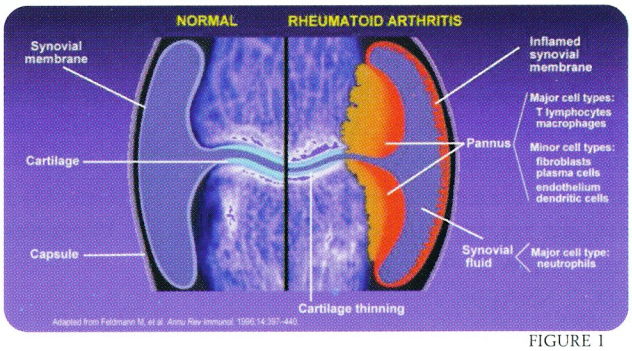


FIGURE 1

Kineret is given by self-injection once a day. Pre-filled syringes are supplied together with a convenient injection tool called 'simpleject.'

Side effects? The most common side effect of Kineret was injection site reactions (ISR). These usually occur during the first 4 weeks of treatment. They tend to disappear within days to weeks, and usually don't require any additional treatment. ISRs can include redness and swelling, but not itching. Low white cell count occurred in some people when Kineret was used together with Enbrel. Therefore it is strongly recommended that Kineret not be used together with Enbrel or Remicade.

Costs. Kineret is not as expensive as Enbrel or Remicade, but it is still very expensive, costing in the neighborhood of $9,000 per year. Because it is self-injected, Medicare will not cover the cost of this treatment. Most other insurance companies should cover Kineret therapy.

BEXTRA® APPROVED BY FDA FOR INFLAMATION AND PAIN:

USEFUL IN RA, OA, AND FIBROMYALGIA

BEXTRA® (generic name: valdecoxib) was the second drug approved by the FDA in November 2001. Bextra, a non-steroidal anti-inflammatory drug (NSAID) of the COX-2 class, is approved for the treatment of the pain and inflammation of arthritis. NSAIDs reduce the pain and inflammation associated with conditions such as RA, osteoarthritis and fibromyalgia (pain only). NSAIDs are usually divided into two classes: COX-1 and COX-2. Although the distinction can be complicated, the main practical difference between these two drug classes is that COX-2 NSAIDs are thought to have less stomach side effects (ulcers). The COX-2 NSAIDs are Vioxx, Celebrex, and now Bextra. Studies submitted to the FDA show that Bextra has the same effectiveness as other NSAIDs but does not increase stomach ulcers compared to placebo.

Bextra is expected to be available early in 2002. It has its full effect when taken once a day. If you need to take a COX-2 NSAID, Bextra may be more convenient and less expensive than the twice a day Celebrex. Costs are expected to be in the same range as the other two COX-2 NSAIDS.

WIN $1000

Return your research questionnaire electronically or by paper within two weeks of receiving it and be eligible for one of three $1,000 awards. The research data bank can best contribute to research when the mailed questions are complete and returned as soon as possible. Anyone who completes the questionnaire within two weeks of receiving it will be eligible for the drawing for the award - given as a token of our gratitude in help with arthritis research. **The winners from the last questionnaire were Betty Spitler of Peoria, AZ; Elizabeth Meyer of Ambler, PA; and Jeanette Blakely of Cleveland, OH. Congratulations to all !**

NOTES FROM THE DIRECTOR-

ABOUT OUR RESEARCH: COST AND EFFECTIVENESS

Evaluating costs and effectiveness of Treatments: what works and who pays ? You may have noticed that drugs are getting more expensive. Although Enbrel, Remicade and Kineret are potent new agents, and the COX-2 drugs Celebrex, Vioxx and Bextra appear to have reduced ulcer-related side effects, all of this comes at a price. As an example, NDB researchers presented Figure 2 at the 2001 American College of Rheumatology (ACR) annual meeting. It shows that the major increase in the cost of arthritis treatment over the last few years was due entirely to the increase in drug costs.

If you have arthritis these costs can be quite real. You may have to pay drug costs directly, in whole or in part, and your insurance may not pay any of the costs. If you have a co-payment requirement, the expense of drugs such as Remicade, Enbrel, and Kineret may be so much that you just can't afford to take them. Insurance companies are also concerned about costs. One way they have of dealing with costs is by reducing benefits.

What is the benefit and who benefits? Costs are but one side of the equation. What about the benefit you may get from treatment? In the end the value of treatment represents some balance between cost and effectiveness. Let's take some easy examples. If a drug barely helps at all then neither you nor your insurance company would want to pay for it. If a drug cures (or almost cures) arthritis, then everyone would want to have it and pay for it. It is when drug effectiveness is less than complete that creates complications.

First, there is the issue of determining how effective the drug is. For example, if a drug reduces pain by 10% or 20% or it eliminates two swollen joints, how shall its effectiveness be rated? Next, suppose that a drug can prevent work disability or slow it down. Should we also take that benefit into account; and how do we convert the ability to work into terms of 'effectiveness'? In the NDB questionnaires we try to measure effectiveness by asking about function, pain, joints, and quality of life. In addition, by asking about your work, your work disability and your income, we can measure the extent to which arthritis related factors such as pain and functional impairment can predict and be associated with these long-term measures of effectiveness (and costs).

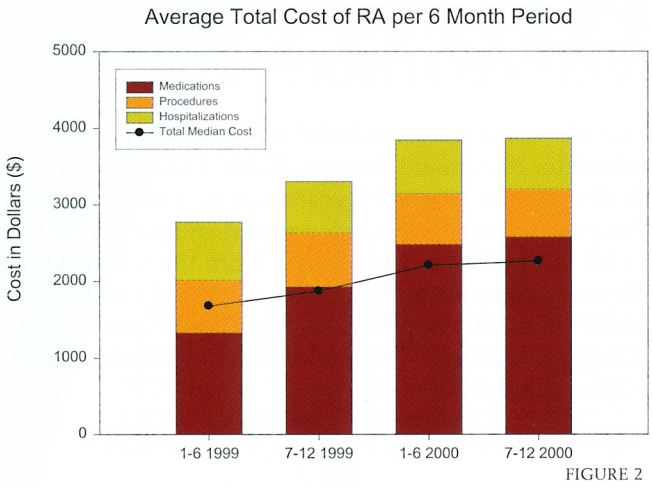


FIGURE 2

Effectiveness for whom? Then there is the issue of 'effectiveness for whom?' If you have arthritis, a 10% reduction in pain may be welcome, but if you are an insurance company you may not think 10% is worth paying for. Also, insurance companies may not pay much attention to work disability if it is something that may happen in the future. Finally, if we make all drugs available to all people, then costs of premiums (or government services) will go up.

Side effects. Side effects of treatment are another aspect of drug effectiveness, cost, and quality of life that must be considered. For example, some NSAIDs can cause ulcers, and the TNF-∝ drugs can be associated with side effects like infection. These types of problems can lead to increased costs due to unexpected office visits, hospitalizations, or lost work days. *So how do we know whether it is worth it, and what does this have to do with NDB research?*

The major increase in the cost of arthritis treatment over the last few years was due entirely to the increase in drug costs.

Establishing costs. The direct medical costs of arthritis can be due to drugs, medical visits, and/or hospitalizations. When you complete a questionnaire we look up the costs of all of the drugs that you take, and we apply government-based costs to your doctor visits, outpatients services, and hospitalizations. Though not all costs are easy to measure. For example, if someone helps you with your work tasks, home tasks, or your self-care, these are also costs of arthritis that you or your helper pay directly or indirectly. Here are some other costs that are not so easy to measure: reduced income related to physical disability, income loss due to early retirement and/or work disability. There are also some other things you may give up when you have arthritis –recreational activities, travel and participation in social and civic events. Not all of these things may apply to you, but overall they are also a part of the real costs of arthritis.

Working and Arthritis. In the January 2002 questionnaire, the NDB together with Dr. Saralynn Allaire of Boston University has added a series of questions designed for persons with RA who are working. This detailed section asks about all aspects of your work in an effort to understand how having arthritis affects your ability to work, affects your ability to earn income, and describes factors that might lead to or protect against future work disability. In the July 2001 questionnaire and again in this questionnaire we asked about your work limitations. Figure 3 is the result of one analysis of this series of questions. Although reported for persons with fibromyalgia, we found almost exactly the same results for persons with RA and OA. To summarize, persons with arthritis or fibromyalgia who were working had limitations in almost all work activities, but especially in physical activities, as might be expected. We also reported at the 2001 ACR annual meeting that these limitations were associated with reduced income.

Putting it all together: costs, effectiveness, and quality of life. Once we have all of the costs related to having arthritis, including direct medical costs and indirect costs related to work and self-care, we add up measures of effectiveness of treatment (as well as measures of ineffectiveness) including those related to pain, function, side effects, arthritis surgery and work problems. When all of this information is at hand we try to determine how much actual benefit can be obtained from the treatments that are available, and how much it costs to get that benefit.

Measuring Quality of Life. The last step in assessing the value of treatment is to measure the actual quality of life (QOL) of persons with arthritis. One way to do this is with the questionnaire scale which asks you to tell us how you rate the quality of your life on a 0-100 numeric scale. The best way to determine QOL is through a detailed interview. We have set up such an interview on the Internet. It takes about 10 minutes to complete. We hope that you will be interested in helping us learn more about quality of life by completing this Internet interview after you complete the NDB regular questionnaire. The QOL interview can be found at www.arthritis-research.org. Please click on the "QOL Interview" button.

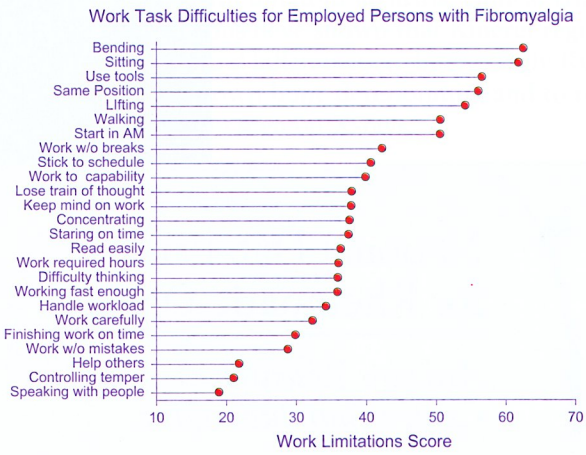


FIGURE 3

Why ask about quality of life (QOL)? One important reason to ask is to determine how much any treatment improves (or worsens) QOL. We can then measure how much it costs to improve quality of life. We can also compare costs and effectiveness across a number of illnesses. For example, we could compare the cost-effectiveness of a new arthritis treatment with the cost-effectiveness of a new heart or kidney drug. With such information all of us, including governments and insurance companies, could obtain an actual view of how much it costs to improve health and quality of life.

Rationing of treatments is occurring in many European countries where governments decide about treatment effectiveness. But it is also occurring in the US as insurance companies place restrictions on treatments based on their views of how much benefit can occur with each treatment. NDB research over the next few years will be directed toward providing important answers to the cost-effectiveness of treatment question. We appreciate your help.

NEW EMPLOYEE KEEPS RESEARCH HOPPING

We are pleased to welcome **Kaleb Michaud** to the National Databank for Rheumatic Diseases. Kaleb, who was diagnosed with JRA by Dr. Wolfe 24 years ago, is a native Kansan working as Dr. Wolfe's research assistant and statistician. He has a BS in Physics and Astronomy from the University of Rochester, and is currently a physics doctoral candidate at Stanford University. Besides doing research he enjoys music, watching football, and helping his family with their rabbit farm (the bunnies are really cute!).

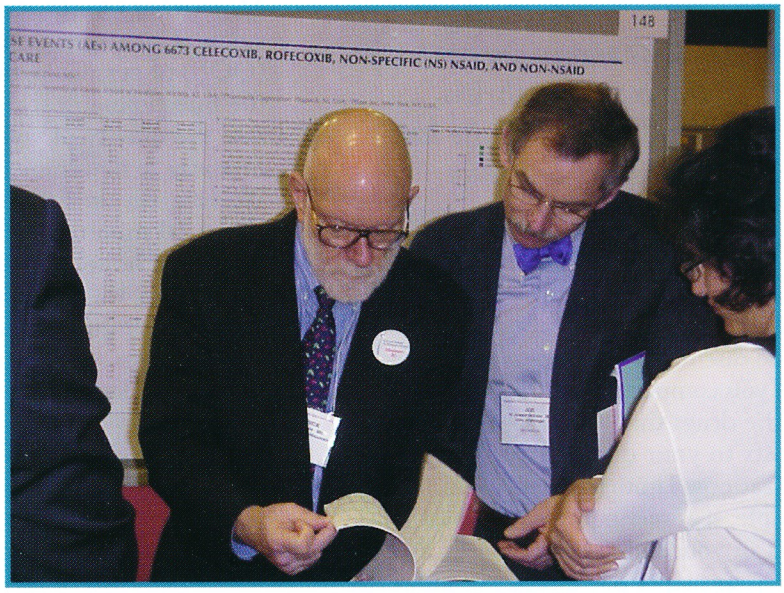
FOR MORE INFORMATION OR TO PARTICIPATE

Arthritis Research Center Foundation, Inc.
1035 North Emporia • Suite 288,
Wichita, KS • 67214
Director -- Fredrick Wolfe, MD
Executive Director -- Kathleen Urbansky
please call 1-800-323-5871 ext. 133
or email info@arthritis-research.org

NEWS FROM THE NDB STAFF:

ACR MASTER AWARD TO DR. FREDRICK WOLFE

Dr. Frederick Wolfe, the National Data Bank for Rheumatic Diseases director, was awarded the American College of Rheumatology (ACR) Master award at the 2001 ACR annual meeting for his work in rheumatoid arthritis, osteoarthritis and fibromyalgia research. This award is given annually to few rheumatologists who have made continuing and important contributions to rheumatology. Dr. Wolfe was also the recipient of the ACR 1995 Distinguished Rheumatologist Award. In the photo to the right, he (center) is shown discussing research results with a rheumatology colleague at the annual ACR meeting.



Dr. Frederick Wolfe discussing research results at the annual ACR meeting (center)

National Databank for Rheumatic Diseases

Arthritis Research Center Foundation, Inc.

***Don't forget to send us your e-mail address for the new on-line surveys.**