Uniform databases in early arthritis: Specific measures to complement classification criteria and indices of clinical change

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ABSTRACT

Rheumatoid arthritis (RA) is not characterized by a single pathognomonic measure such as blood pressure in hypertension or cholesterol in hyperlipidemia, which can be used in the diagnosis, prognosis, and monitoring of patient status. Measures such as swollen joints and an elevated erythrocyte sedimentation rate are certainly valuable, but many individuals with abnormal values have conditions other than RA, and many people with RA may have favorable values for one or more of these measures. Therefore, the rheumatology community has developed indices of several measures, such as classification criteria, the disease activity score (DAS), and the ACR Core Data Set with 20%, 50% and 70% improvement (ACR 20, ACR 50, ACR 70) to classify and monitor patients with RA.

While these indices have greatly advanced clinical research, databases for long-term observations, including those in early RA described in this Supplement, differ in 20-50% of included data, and the software platforms for these databases differ sufficiently to render it difficult to merge the data to compare one data set to another. It has been proposed that a uniform database for early arthritis clinical research could help advance clinical research in early arthritis. One example of such a database, termed a "standard protocol to evaluate rheumatoid arthritis" (SPERA), has been in use for almost two decades in one clinical site, and has proven valuable in a number of ways, including the demonstration of early radiographic damage, development of a 28-joint count, and documentation that patient questionnaire data are correlated significantly with laboratory, joint count and radiographic data, although questionnaire data are the strongest predictors of severe outcomes including work disability and premature mortality. The use of a uniform database in no way precludes the collection of additional data at particular centers including immunogenetic, serologic, or structural magnetic resonance imaging (MRI) data. However, the availability of an infrastructure of standard data in all RA databases would enhance clinical research in early RA.

Rheumatoid arthritis (RA) differs from other dysregulatory chronic diseases such as hypertension or hyperlipidemia, in that a robust, single, quantitative pathognomonic measure, such as an elevated blood pressure or elevated cholesterol, is not available for diagnosis, prognosis and management in RA. Measures such as swollen joints, functional disability, rheumatoid factor and an elevated erythrocyte sedimentation rate (ESR) are certainly valuable in diagnosis and prognosis. However, many individuals identified by these markers have conditions other than RA, and many people with progressive RA may have relatively favorable values for one or more of these measures. Hence, the management of RA is generally not conducted according to any single measure, as is management of hypertension and hyperlipidemia, and often is not conducted according to any quantitative measure.

The rheumatology community has addressed the absence of a single pathognomonic measure by identifying clusters of different types of quantitative measures such as criteria for classification of patients (1, 2), clinical status such as the disease activity score (DAS) (3, 4) and the American College of Rheumatology (ACR) Core Data Set

(5-7), and improvement (8). Classification criteria for RA (1, 2) have provided a major advance, allowing the identification of relatively homogeneous cohorts of patients in clinical trials and other clinical research. However, they are quite limited for prognosis and function poorly in early RA (9, 10). Specific measures, such as the number of involved joints or poor functional status, have substantially greater prognostic value than classification criteria for predicting short-term persistence and long-term severity (10).

The DAS (3, 4) and ACR Core Data Set (5-7) have been invaluable reporting standards in clinical trials. However, these indices include only measures of disease activity, such as swollen joint counts and ESR, and do not include measures of damage such as deformed joints, or outcomes such as joint replacement surgery (11). One measure of damage, a radiographic score, is included in the ACR Core Data Set for studies of longer than one year or longer, but is not included in ACR 20, 50 or 70 improvement criteria (8). Changes in clinical status in RA are reported generally in the rheumatology literature as DAS and ACR 20 indices, rather than as individual measures, and outcomes other than radiographic scores are not analyzed according to a single baseline measure, such as blood pressure or cholesterol.

Several reports have presented documentation of specific markers in predicting work disability (12-14) and mortality in RA (15-18), including a high number of involved joints, poor functional status documented by a patient questionnaire, physical measures such as grip strength, walk time, and the button test,as well as comorbid cardiovascular disease. These analyses have provided some initially surprising results, such as the higher prognostic value of patient questionnaires than joint counts, radiographic scores, rheumatoid factor or ESR for long-term outcomes (19), and the observation that relatively simple measures such as patient questionnaires of 20 or 8 activities of daily living and joint counts of 28, 12, and even 6 joints provide powerful prognostic indicators (15). In larger data sets, radiographic scores and laboratory tests also serve to predict mortality (17). However, in no data set are these variables as powerful as self-report questionnaire scores for functional disability in predicting outcomes such as work disability or mortality, in part because only a minority of patients has the poorest clinical status according to radiographic and laboratory data (17).

Clinical trials, clinical research and clinical care of RA all require a baseline database of measures pertinent to the prognosis, care, and outcomes of individual patients. Most such databases are 50-80% identical, as there is general consensus concerning the appropriate measures. However, some differences are seen in the data collected, as well as in the platforms and software used for the organization and storage of these data. These differences limit severely the capacity to compare information and outcomes from different sources, similar to the limitations in interpretation of clinical trial data prior to introduction of the DAS and ACR 20.

A consensus recommendation for a "core set of domains in reporting requirements for longitudinal observational studies in rheumatology" emerged from an Outcome Measures in Rheumatoid Arthritis Clinical Trials (OMERACT) conference in 1998 (20). This report suggested 5 core domains: health status, disease process, damage, mortality, and toxicity/adverse reactions. Two additional domains, work disability and costs, were recognized as important, but did not need to be included in all longitudinal studies. This effort may be viewed as an effort to extend the concept of a uniform clinical database for rheumatic diseases, initially proposed by Fries in the 1970s (21,22), beyond clinical trials to routine clinical care. Such a uniform database presents an effort toward standardization, just as a laboratory test such as the erythrocyte sedimentation rate evolved from different methods to a single Westergren method, which provides a measure that all rheumatologists can interpret similarly.

A uniform database in no way excludes specialized studies of specific interest, such as magnetic resonance imaging (MRI) scans, serologic markers, immunogenetic markers or others. Indeed, a core set of uniform measures would provide a baseline that could be used by all rheumatologists and provide a strong platform for "evidence-based" rheumatology.

There is no single "best" database for the long-term observation of RA, and many excellent approaches exist to collect data on patients with early arthritis or established RA, as seen in the many protocols in reports in this Supplement. We summarize here a uniform database which has been used in our research for more than 18 years, which we have termed a "standard protocol to evaluate rheumatoid arthritis" (SPERA) (23). This protocol provides a pragmatic assessment in 5 pages that can be completed in 15-30 minutes, to capture most information collected on an initial visit of a patient with early arthritis who might have RA.

The SPERA protocol has evolved somewhat over the 18 years, but the database is 95% identical over almost 2 decades, and has proven useful in clinical research concerning the prognosis and monitoring of patients, including observation of radiographic damage in most patients within the first 2 years of disease (24), development of a 28-joint count (25), recognition that patient questionnaires are correlated significantly with joint counts, radiographic scores and laboratory tests (26), although they are better predictors of work disability (27) and mortality (14, 18), and of the relatively small proportion of patients who were eligible for clinical trials in the contemporary care of RA (28, 29).

The 5 pages of the SPERA protocol are designed to assess:

1. Clinical features - Classification criteria, comorbidities, extra-articular manifestations, surgeries, laboratory tests, family history, and work status (Appendix I).
2. Medications used for RA (Appendix II).
3. A 42-joint count, which includes 10 proximal interphalangeal (PIP) joints of the hand, 10 metacar-

pophalangeal (MCP) joints of the hand, 2 wrists, 2 elbows, 2 shoulders, 2 hips, 2 knees, 2 ankles and 10 metatarsophalangeal (MTP) joints (hips and shoulders are not scored for swelling). All joints are scored for tenderness, swelling (except hips and shoulders), limited motion, and surgery, with a space to indicate that a joint is normal (Appendix III).

4. A patient self-report Multi-Dimensional Health Assessment Questionnaire (MDHAQ) including the modified Health Assessment Questionnaire (MHAQ) for functional capacity, visual analog scales to assess pain, global health and fatigue, minutes of morning stiffness, and a symptom checklist (Appendix IV).
5. Radiographic scoring sheet according to the Sharp or Larsen scores.

A standard HAQ or clinical HAQ (CLINHAQ) may be used. Microsoft access software is available to record and store these data if a computer record is desired. However, computerization is needed only if analyses of groups of patients is desired. The 2 pages of clinical features and medications are kept on in the patient record, without computer recording, for updating in standard care.

A brief summary of data concerning patients with early RA, termed the "early rheumatoid arthritis treatment evaluation registry" (ERATER) (28-30), evaluated according to the SPERA method is summarized briefly here. These data concerning 426 patients, 332 of whom were seen at a private practice rheumatology setting in Nashville, Tennessee by five private practice rheumatologists, and 94 of whom were seen at different sites, including 31 at Vanderbilt University by TP, are presented to illustrate the potential use of such a database.

Demographic features (Table I) indicate a mean age of 52.9 years, and a mean education of 13.1 years; the cohort is 73.7% female, 65% married, and 86.6% Caucasian, rather typical features of patients with RA. Because this was a database in which patients had up to 3 years of disease, most met classification criteria for RA (Table II), including 86.6% with morning stiffness greater than 1 hour, 90.8% with soft tissue swelling of 3 or more groups, 95% with swelling of PIP, MCP or wrist joints, 89.7% with symmetrical swelling, and 66.2% with positive rheumatoid factor. However, only 38.7% had radiographic erosions (suggesting improved status at this time) and only 9.4% had subcutaneous nodules. Most extra-articular features in this group with relatively early RA were seen in fewer than 2% of patients (Table III), other than subcutaneous nodules in 9.4% and carpal tunnel syndrome in 18.3% of patients. Analyses of comorbidities (Table IV) indicates hypertension in 31.5%, ischemic heart disease in 5.2%, peptic ulcer in 6.3%, cancer in 8.9% and cataracts in 10.1% of patients, again within the first 3 years of RA. The high level of cataracts within the first 3 years of RA is somewhat surprising.

Overall, 53.5% had ever smoked, 27% were current smokers, 7.5% had undergone carpal tunnel surgery, 7.3% back surgery, and 6.6% cataract surgery (Table V). The family history indicated RA in the father in 8%, the mother in 10.6%, siblings in 7.3%, and children in 1.2% (Table VI).

The most prominently involved joint for tenderness was the wrist (Table VII), and for swelling the second and third MCP, the third PIP, and the wrists. Limited motion or deformity, which are included in the SPERA as baseline measures of damage, was most common in wrists. No specific joint was affected by tenderness or swelling in more than 51% of patients (Table VII). Among therapies, methotrexate was the first therapy used in 81% of patients compared to 7.7% hydroxychloroquine, and 3.8% leflunomide (Table VIII),

Table I. Demographic characteristics: early rheumatoid arthritis treatment evaluation registry (ERATER) database - 426 patients.

Characteristics	Number	Percent
% Female	314	73.7%
% Married	277	65.0%
% Caucasian	369	86.6%
% Medical Specialists of Nashville	332	77.9%
Age - mean	52.9 years	
Education - mean	13.1 years	
Stopped working due to RA (of 127 who were working at the onset) (31)	13	10%

Table II. ACR criteria for RA: early rheumatoid arthritis treatment evaluation registry (ERATER) database - 426 patients.

Measure	#	%
Morning stiffness > 1 hour	369	86.6%
Soft tissue swelling of > 3 joint groups	387	90.8%
Swelling of PIP, MCP or wrist joints	405	95.1%
Symmetrical swelling	382	89.7%
Subcutaneous nodules	40	9.4%
Positive rheumatoid factor	282	66.2%
Radiographic erosions (n = 349)	135	38.7%

Table III. Extra-articular features of RA: early rheumatoid arthritis treatment evaluation registry (ERATER) database - 426 patients.

Extra-articular feature	#	%
Pulmonary fibrosis	3	0.7%
Pulmonary nodule	1	0.2%
Raynaud's phenomenon	8	1.9%
Pericarditis	2	0.5%
Felty's syndrome	1	0.2%
Lymphadenopathy	0	0
Carpal tunnel syndrome	78	18.3%
Vasculitis	1	0.2%
Scleritis	2	0.5%

Table IV. Comorbidities: early rheumatoid arthritis treatment evaluation registry (ERATER) database - 426 patients.

Disease of medical condition	#	%
Hypertension	134	31.5%
Ischemic heart disease	22	5.2%
Peptic ulcer	27	6.3%
Renal disease	7	1.6%
Asthma	29	6.8%
Chronic bronchitis	17	4.0%
Diabetes mellitus	39	9.2%
Thyroid disease	46	10.8%
Cancer	38	8.9%
Stroke	6	1.4%
Parkinson's disease	1	0.2%
Chronic back pain	32	7.5%
Osteoarthritis	19	4.5%
Fibromyalgia	11	2.6%
Psoriasis	10	2.3%
Cataracts	43	10.1%
Psychiatric disease	9	2.1%

Table V. Habits and surgeries from patient history: early rheumatoid arthritis treatment evaluation registry (ERATER) database - 426 patients.

Variable	#	%
Smoke cigarettes - ever	228	53.5%
Smoke cigarettes - now	115	27.0%
Alcohol abuse	5	1.2%
Carpal tunnel surgery	32	7.5%
Heart by-pass surgery	16	3.8%
Back surgery	31	7.3%
Cataract surgery	28	6.6%

Table VI. Family history of rheumatoid arthritis (RA): early rheumatoid arthritis treatment evaluation registry (ERATER) database - 426 patients.

Relationship	#	%
Father with RA	34	8.0%
Mother with RA	45	10.6%
Siblings with RA	31	7.3%
Children with RA	5	1.2%

Table VII. Percentage of abnormal joints: early rheumatoid arthritis treatment evaluation registry (ERATER) database - 414 patients.

	Tenderness		Swelling		Limited motion / Deformity	
Joint	Left	Right	Left	Right	Left	Right
PIP - 1	12%	15%	8%	10%	3%	4%
PIP - 2	18%	22%	20%	27%	8%	11%
PIP - 3	21%	31%	37%	51%	10%	14%
PIP - 4	13%	18%	19%	24%	7%	10%
PIP - 5	10%	14%	15%	12%	9%	17%
MCP - 1	20%	21%	10%	10%	12%	17%
MCP - 2	23%	22%	28%	43%	4%	6%
MCP - 3	22%	22%	30%	35%	4%	6%
MCP - 4	12%	13%	9%	10%	2%	3%
MCP - 5	10%	12%	9%	14%	2%	4%
Wrist	37%	40%	33%	34%	24%	28%
Elbow	16%	17%	3%	6%	3%	8%
Shoulder	24%	24%			2%	3%
Knee	24%	24%	14%	17%	6%	7%

Table VIII. Disease modifying anti-rheumatic drugs at first visit: early rheumatoid arthritis treatment evaluation registry (ERATER) database - 426 patients.

Drug	Number	Percent
Methotrexate	345	81.0%
Hydroxychloroquine	33	7.7%
Leflunomide	16	3.8%
Prednisone	11	2.6%
Sulfasalazine	3	0.7%
Azathioprine	1	0.2%
Clinical trial	1	0.2%
Infliximab	1	0.2%
Methotrexate + hydroxychloroquine	3	0.7%
Sulfasalazine + hydroxychloroquine	2	0.5%
Methotrexate + sulfasalazine	1	0.2%
Methotrexate + infliximab	1	0.2%
Methotrexate + Enbrel	1	0.2%
None	7	1.6%
Total	426	100%

reflecting the practice in Nashville, Tennessee, where most of these patients were identified (30).

These data illustrate the potential for a uniform database that could be available for the clinical assessment of patients with early RA. Again it is emphasized that this is not presented as a "perfect" database, but as a model of an information acquiring system that can be completed for most patients in 15-30 minutes. The SPERA assessment provides a database of most variables that are considered to be relevant to short-term responses to therapies as well as to long-term outcomes not only for clinical research, but also for standard long-term clinical care.

The specific single measures can then be applied to studies in immunogenetics, serologic markers, imaging markers, and other clinical research to better stratify patients than classification criteria. If such a database were common to the infrastructure of all rheumatology care and research, it might provide specific markers, as is the case for single markers such as hypertension or hypercholesterolemia, to enhance long-term knowledge. Recognition of important specific measures such as poor functional status or a high number of involved joints as potential predictors of work disability and death, might enhance recognition of the urgency of treatment for RA, as is now the case for cardiovascular diseases.

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APPENDIX

On the following pages, forms that have been in use for almost 20 years to collect patient information for the SPERA database are reproduced. Rheumatologists and clinical investigators are invited to use these forms in clinical care and clinical research.

I. Clinical Lifetime Updateable Evaluation (CLUE–RA) – Rheumatoid Arthritis Clinical Features (R585).

II. Clinical Lifetime Updateable Evaluation (CLUE–MED) – Rheumatoid Arthritis Medications (R588).

III. Joint examination form.

IV. Multi-Dimensional Health Assessment Questionnaire (F582-NP2).

Clinical Lifetime Updateable Evaluation (CLUE - RA) - Rheumatoid Arthritis Clinical Features (R606)

This form is designed to be updated at subsequent patient visits to provide a lifetime record.

NAME: Last _____ First _____ DOB _____ ID# _____

CLUE FORM COMPLETED BY _____ DATE _____ Rheumatologist _____

Sex _____ Race _____ Insurance _____

RA-1st Symptom _____ RA-Dx (Mo/Yr) _____

1st Rheumatologist _____ 1st Visit (Mo/Yr)_____

1st DMARD used _____ 1st DMARD (Mo/Yr) _____

ARA CRITERIA FOR RA (Please enter "—" or "+")

("—" may be updated to "+", but a blank space is unknown)	Ever? "—" or "+"	If "+", Mo/Yr
Morning Stiffness > 1 hour		
Soft tissue swelling of >= 3 jt groups		
Swelling of PIP, MCP, or wrist joints		
Symmetrical Swelling		
Subcutaneous Nodule		
Positive Rheumatoid Factor		
Highest Rheumatoid		
Radiographic Erosion		

FAMILY HISTORY OF RA (Please enter "—" or "+"):

___ Parent _____ Father _____ Mother

___ Sibling #_____ Brother(s) #_____ Sisters(s)

___ Child #_____ Son(s) #_____ Daughters(s)

___ Other Family _____

EXTRA-ARTICULAR DISEASE (enter "—" or "+")

("—" may be updated to "+", but a blank space is unknown)	Ever? "—" or "+"	If "+", Onset Mo/Yr
Malaise or weakness		
Pulmonary fibrosis		
Pulmonary nodules		
Dyspnea on Exertion		
Dry eyes		
Dry mouth		
Clinical pericarditis		
Felty's syndrome		
Lymphadenopathy		
Carpal tunnel		
Tarsal tunnel		
Vasculitis		
Scleritis		
Neuropathy		
Raynaud's phenomenon		

MENSTRUAL HISTORY Menopausal (— /+): _____

Date (Mo/Yr): _____ HRT (— /+): _____

WORK HISTORY Occupation _____

At onset of RA: ___ Work Full-Time, ___ Work Part-Time, ___ Retired,

___ Homemaker, ___ Student, ___ Disabled, Other _____

Current status: ___ Work Full-Time, ___ Work Part-Time, ___ Retired,

___ Homemaker, ___ Student, ___ Disabled, Other _____

If stopped work, Year stopped: _____

Due to: _____ RA, _____ Retired, Other disease _____

If disability payments received, Year began _____

COMORBIDITIES (Please enter "—" or "+")

("—" may be updated to "+", but a blank space is unknown)	Ever? "—" or "+"	If "+" Mo/Yr
Hypertension		
Angina		
Coronary Artery Disease		
Other Heart Disease		
Hyperlipidemia		
Peripheral Vascular Disease		
Peptic ulcer		
Inflammatory Bowel Disease		
Kidney disease		
Asthma		
Chronic bronchitis		
Diabetes Mellitus		
Thyroid disease		
Cancer		
Stroke		
Parkinson's Disease		
Chronic Back Pain		
Musculoskeletal Trauma		
Fractures since age 50		
Severe Osteoporosis		
Severe Osteoarthritis		
Severe Infection		
Herpes Zoster/Shingles		
Fibromyalgia		
Psoriasis		
Cataracts		
Psychiatric Disease		
AIDS		
Alcoholism		

Smoking: Ever ____ #Pk _____ Start Yr _____

Smoking: Now ____ PkYrs _____ Yr D/C ____

RADIOGRAPH DATES: (H-Hands, F-Feet, B-Both)

BONE DENSITOMETRY DATES: (Mo\Day\Yr)

SURGERIES	Ever? "—" or "+"	If "+", Mo/Yr	Mo/Yr	Mo/Yr
Carpal Tunnel				
Heart Bypass				
Back Surgery				
Cataract				

JT SURGERY/FRACTURE (A-Arthroscopy, S-Synovectomy, TJR-Replacement, JF-Fusion, JR-Reconstruction, F-Fracture)

R/L Hand (mo/yr) _____ R/L Elbow (mo/yr) _____

R/L Hip (mo/yr) _____ R/L Foot (mo/yr) _____

R/L Knee (mo/yr) _____ C-Spine (mo/yr) _____

Clinical Lifetime Updateable Evaluation (CLUE - MED) - Rheumatoid Arthritis Medications (R607)

This form is designed to be updated at each patient visit to provide a lifetime record. Date of Last Update:

PT NAME_____DOB_____ (Use pencil)_____

(If a DMARD has been discontinued more than 3 months, the 2nd course begins in blank space or cross out another drug and begin 2nd course there.)

DMARD review **Date of 1st visit**_____

— may be updated in future to +	Ever —/+	Start date (mo/yr)	Stop date (mo/yr)	Efficacy (Code or description)	Toxicity (Code or description)	Reason to discontinue	If toxicity code/description
PREDNISONE							
METHOTREXATE							
HYDROXYCHLOROQUINE							
SULFASALAZINE							
IM GOLD							
CYCLOSPORINE							
AURANOFIN							
AZATHIOPRINE							
D-PENICILLAMINE							
CYCLOPHOSPHAMIDE							
LEFLUNOMIDE							
ETANERCEPT							
INFLIXIMAB(see below)							
ANAKINRA							
ADALIMUMAB							

INFLIXIMAB (Start new line if dose changes)

Dose:		**Date:**												

Efficacy Code: **NO**=No benefit, **SOME**=Some benefit, **MUCH**=Much benefit, **REM**=Remission, **WO**=Worse, **UNK**=Unknown

Toxicity Code: **NO**=No toxicity, **NA**=Nausea, **DI**=Diarrhea, **GI**=Other GI, **HA**=Hair loss, **RA**=Rash, **MU**=Mucous, **LIVER**=Liver enzymes, **HEM**=Hematology, **PROT**=Proteinuria, **CREAT**=Creatinine, **BP**=Hypertension, **RESP**=Respiratory, **NODU**=Nodules, **INF**=Infections, **OTH**=Other

Reason for discontinuation: **TOX**=Toxicity, specify (Toxicity Code above), **INEFF**=Inefficacy, **LOSS**=Loss of efficacy, **COST**=Costs, **COMORB**=Comorbidities, **PREG**=Pregnancy, **PAT**=Patient's decision, **MD**=MD stopped, **REM**=Remission/Not needed, **DEAD**=Patient died, **OTH**=Other

NSAID review. (Taken continuously over at least 2 weeks for arthritis.)

— may be updated in future to +	Ever —/+	Start date (mo/yr)	Stop date (mo/yr)	Efficacy (Code or description)	Toxicity (Code or description)	Reason to stop	If toxicity code/description
ACETAMINOPHEN (TYLENOL)							
ASPIRIN							
IBUPROFEN (ADVIL, NUPRIN)							
NAPROXEN (ALEVE)							
DICLOFENAC (VOLTAREN)							
NABUMATONE (RELAFEN)							
CELECOXIB (CELEBREX)							
ROFECOXIB (VIOXX)							
MELOXICAM (MOBIC)							
VALDECOXIB (BEXTRA)							

Additional drugs and/or other courses may be entered in blank spaces.

JOINT EXAMINATION FORM PT Name _____ Date_____ **R608-JT**

Please mark below your assessment of the patient's current disease activity:

NO ACTIVITY |——————————————————————| VERY ACTIVE

JOINT COUNT - SCORE EACH JOINT AS: **"+"** or **"POSitive"** or **"ABNormal"** versus **"-"** or **"NEGative"** or **"NORMal"**

	If NORM, mark"NL" & go to next jt	Tender or pain on motion	Swollen	Limited motion or de-formed	# Sur-ger-ies§		If NORM, mark"NL" & go to next jt	Tender or pain on motion	Swollen	Limited motion or de-formed	# Sur-ger-ies§
R-PIP1	___	___	___	___	___	L-PIP1	___	___	___	___	___
R-PIP2	___	___	___	___	___	L-PIP2	___	___	___	___	___
R-PIP3	___	___	___	___	___	L-PIP3	___	___	___	___	___
R-PIP4	___	___	___	___	___	L-PIP4	___	___	___	___	___
R-PIP5	___	___	___	___	___	L-PIP5	___	___	___	___	___
R-MCP1	___	___	___	___	___	L-MCP1	___	___	___	___	___
R-MCP2	___	___	___	___	___	L-MCP2	___	___	___	___	___
R-MCP3	___	___	___	___	___	L-MCP3	___	___	___	___	___
R-MCP4	___	___	___	___	___	L-MCP4	___	___	___	___	___
R-MCP5	___	___	___	___	___	L-MCP5	___	___	___	___	___
R-WRIST	___	___	___	___	___	L-WRIST	___	___	___	___	___
R-ELBOW	___	___	___	___	___	L-ELBOW	___	___	___	___	___
R-SHLDR	___	___	XXX	___	___	L-SHLDR	___	___	XXX	___	___
R-HIP	___	___	XXX	___	___	L-HIP	___	___	XXX	___	___
R-KNEE	___	___	___	___	___	L-KNEE	___	___	___	___	___
R-ANKLE	___	___	___	___	___	L-ANKLE	___	___	___	___	___
R-MTP1	___	___	___	___	___	L-MTP1	___	___	___	___	___
R-MTP2	___	___	___	___	___	L-MTP2	___	___	___	___	___
R-MTP3	___	___	___	___	___	L-MTP3	___	___	___	___	___
R-MTP4	___	___	___	___	___	L-MTP4	___	___	___	___	___
R-MTP5	___	___	___	___	___	L-MTP5	___	___	___	___	___

§ - **S** = Synovectomy **J** = Total Joint Replacement (TJR) **O** = Other

Description only - not in formal joint count:

NECK ___ _____ FEET ___ _____

BACK ___ _____ OTHER ___ _____

Indicate positive tender points:

Multi-Dimensional Health Assessment Questionnaire (R605-NP2)

This questionnaire includes information not available from blood tests, X-rays, or any source other than you. Please try to answer each question, even if you do not think it is related to you at this time. <u>There are no right or wrong answers.</u> Please answer exactly as you think or feel. Thank you.

1. Please check (√) the ONE best answer for your abilities at this time:

OVER THE LAST WEEK, were you able to:	Without **ANY** Difficulty	With **SOME** Difficulty	With **MUCH** Difficulty	**UNABLE** To Do
a. Dress yourself, including tying shoelaces and doing buttons?	0	1	2	3
b. Get in and out of bed?	0	1	2	3
c. Lift a full cup or glass to your mouth?	0	1	2	3
d. Walk outdoors on flat ground?	0	1	2	3
e. Wash and dry your entire body?	0	1	2	3
f. Bend down to pick up clothing from the floor?	0	1	2	3
g. Turn regular faucets on and off?	0	1	2	3
h. Get in and out of a car, bus, train, or airplane?	0	1	2	3
i. Walk two miles?	0	1	2	3
j. Participate in sports and games as you would like?	0	1	2	3
k. Get a good night's sleep?	0	1	2	3
l. Deal with feelings of anxiety or being nervous?	0	1	2	3
m. Deal with feelings of depression or feeling blue?	0	1	2	3

2. How much pain have you had because of your condition OVER THE PAST WEEK? Place a mark below to indicate how severe your pain has been:

NO PAIN ——————————— PAIN AS BAD AS IT COULD BE

3. How would you rate your general health?

Excellent___(1), Very good___(2), Good___(3), Fair___(4), Poor___(5)

4. How much of a problem has UNUSUAL fatigue or tiredness been for you OVER THE PAST WEEK? Place a mark below to indicate how severe your fatigue has been:

FATIGUE IS NO PROBLEM ——————————— FATIGUE IS A MAJOR PROBLEM

5. How do you feel TODAY compared to ONE WEEK AGO? Please check (√) only one.

Much Better___(1), **Better**___(2), the **Same**___(3), **Worse**___(4), **Much Worse**___(5) than one week ago

6. Considering all the ways in which illness and health conditions may affect you at this time, please make a mark below to show how you are doing:

VERY WELL ——————————— VERY POORLY

7. What is the reason that you are seeing a doctor today? Please check and write anything you would like.
☐ Check-up, ☐ A new illness or problem, ☐ Managing an illness, ☐ Other, Please write below any further information which you think will help in your care - you don't need to write anything - and turn to the other side:

_____

_____

_____

FOR OFFICE USE ONLY

FN ☐

1=0.1 16=1.6
2=0.2 17=1.7
3=0.3 18=1.8
4=0.4 19=1.9
5=0.5 20=2.0
6=0.6 21=2.1
7=0.7 22=2.2
8=0.8 23=2.3
9=0.9 24=2.4
10=1.0 25=2.5
11=1.1 26=2.6
12=1.2 27=2.7
13=1.3 28=2.8
14=1.4 29=2.9
15=1.5 30=3.0

PS ☐

PN ☐

GH ☐

FT ☐

CH ☐

GL ☐

8. Please check (√) if you have experienced any of the following over the last month:

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SY

__Fever	__Lump in your throat	__Paralysis of arms or legs
__Weight gain (>10 lbs)	__Cough	__Numbness or tingling of arms or legs
__Weight loss (<10 lbs)	__Shortness of breath	__Fainting spells
__Feeling sickly	__Wheezing	__Swelling of hands
__Headaches	__Pain in the chest	__Swelling of ankles
__Unusual fatigue	__Heart pounding (palpitations)	__Swelling in other joints
__Swollen glands	__Trouble swallowing	__Joint pain
__Loss of appetite	__Heartburn or stomach gas	__Back pain
__Skin rash or hives	__Stomach pain or cramps	__Neck pain
__Unusual bruising or bleeding	__Nausea	__Use of drugs not sold in stores
__Other skin problems	__Vomiting	__Smoking cigarettes
__Loss of hair	__Constipation	__More than 2 alcoholic drinks per day
__Dry eyes	__Diarrhea	__Depression - feeling blue
__Other eye problems	__Dark or bloody stools	__Anxiety - feeling nervous
__Problems with hearing	__Problems with urination	__Problems with thinking
__Ringing in the ears	__Gynecological (female) problems	__Problems with memory
__Stuffy nose	__Dizziness	__Problems with sleeping
__Sores in the mouth	__Losing your balance	__Sexual problems
__Dry mouth	__Muscle pain, aches, or cramps	__Burning in sex organs
__Problems with smell or taste	__Muscle weakness	__Problems with social activities

Please check (√) here if you have had none of these symptoms: _____.

9. What is your current occupation? (If you are not working now, what was your past occupation?)

_____

10. How many other people live at home with you? ___

[Please check (√) who lives with you.]

__Spouse/partner __Parents

__Sons or daughters __I live alone

__Others (describe)_____

11. At this time, are you? [Please check (√) all that apply.]

__Working full time __Retired

__Working part time __Student

__Homemaker-full time __Disabled

__Other (describe)_____

12. How many years of school have you completed?

Please circle the number of years of school.

1 2 3 4 5 6 7 8 9 10

11 12 13 14 15 16 17 18 19 20

Your Name_____ Today's Date_____ Time of Day _____ AM | PM
First Middle Last

Street Address_____ City_____ State_____ Zip_____

Telephone (___) _____ Social Security #_____ Date of Birth _____
Area Code Number For Identification Purposes Only

SEX: ☐ Female ☐ Male ETHNIC GROUP: ☐ Asian ☐ Black ☐ Hispanic ☐ White ☐ Other MARITAL STATUS: ☐ Single ☐ Married ☐ Divorced ☐ Widowed ☐ Separated

Please check if this questionnaire is completed **entirely by patient** ☐ or **with help from (name)**_____

13. Please write below ALL pills that you took over the last TWO WEEKS, with or without a prescription. Please include aspirin, birth control pills, pain pills, alternative therapy, health supplements and any pills sold in health food stores:

NAME OF DRUG, MEDICINE OR ALTERNATIVE THERAPY	DOSE (if known)	How many per day or week?	NAME OF DRUG, MEDICINE OR ALTERNATIVE THERAPY	DOSE (if known)	How many per day or week?
1.			6.		
2.			7.		
3.			8.		
4.			9.		
5.			10.		

Please list the name and telephone number of your primary care physician:

Name_____ Telephone _____

Please list the name of your insurance carrier:

Insurance_____ Identification number_____

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE TO MONITOR YOUR MEDICAL SITUATION.

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