

Full Papers

ASSESSING ACTIVITY OF RHEUMATIC ARTHRITIS WITH FLUORESCENCE OPTICAL IMAGING

Bremer C, Werner SG, Langer HE

European Musculoskeletal Review 2010; 4: 2-6

DETECTION OF RHEUMATOID ARTHRITIS USING NON-SPECIFIC CONTRAST ENHANCED FLUORESCENCE IMAGING

Fischer T, Ebert B, Voigt J, McDonald R, Schneider U, Thomas A, Hamm B, Hermann KG

[Academic Radiology 2010; 17: 375-381](#)

FLUORESCENCE OPTICAL IMAGING OF JUVENILE ARTHRITIS

Werner SG, Langer HE, Horneff G

[J Rheumatol 2011; 38; 1447](#)

OPTICAL IMAGING OF RHEUMATOID ARTHRITIS

Golokov D, Meier R, Rummeny E, Daldrup-Link H.

[Int J Clin Rheumatol 2011; 6\(1\): 67-75](#)

INFLAMMATION ASSESSMENT IN PATIENTS WITH ARTHRITIS USING A NOVEL IN VIVO FLUORESCENCE OPTICAL IMAGING TECHNOLOGY

Werner SG, Langer HE, Ohrndorf S, Bahner M, Schott M, Schwenke C, Schirner M, Bastian H, Lind-Albrecht G, Kurtz D, Burmester G, Backhaus M

[Annals of Rheumatic Disease 2012; 71:504-510](#)

Fluoreszenzoptisches Bildgebungssystem Xiralite® zur Einschätzung der Therapieeffizienz bei JIA

Horneff G, Werner SG, Langer HE, Backhaus M

[arthritis+rheuma 2012; 29: 42-44](#)

Fluoreszenzoptische Bildgebung mit dem Xiralite-System in der Kinderrheumatologie

Werner SG, Langer HE, Backhaus M, Horneff G

[arthritis+rheuma 2012; 32: 161-166](#)

Moderne Bildgebung in der Diagnostik der frühen Arthritis

Werner SG, Ostendorf B, Backhaus M

[arthritis+rheuma 2012; 32: 207-214](#)

Detection of synovitis in the hands of patients with rheumatologic disorders: diagnostic performance of optical imaging in comparison with magnetic resonance imaging.

Meier R, Thürmel K, Moog P, Noël PB, Ahari C, Sievert M, Dorn F, Waldt S, Schaeffeler C, Golovko D, Haller B, Ganter C, Weckbach S, Woertler K, Rummeny EJ.

[Arthritis & Rheumatism; 2012; 64: 2489-2498](#)

Musculoskeletal ultrasound and other imaging modalities in rheumatoid arthritis

Ohrndorf S, Werner SG, Finzel S, Backhaus M.

[Curr Opin Rheumatol 2013; 25: 367-74](#)

Indocyanine green enhanced fluorescence optical imaging in early and very early arthritis patients: A comparative study with magnetic resonance imaging

Werner SG, Langer HE, Schott P, Bahner M, Schwenke C, Lind-Albrecht G, Spiecker F, Kurtz B, Burmester GR, Backhaus M.

[Arthritis & Rheumatism 2013; 65: 3036-44](#)

Spatiotemporal analysis for indocyanine green-aided imaging of rheumatoid arthritis in hand joints

Mohajerani P, Meier R, Noël PB, Rummeny EJ, Ntziachristos V.

[J Biomed Opt. 2013; 18\(9\): 97004](#)

Bildgebende Verfahren bei Psoriasisarthritis

Hermann KG, Ohrndorf S, Werner SG, Finzel S, Backhaus M.

[Z Rheumatol 2013; 72: 771-8](#)

Synovitis in Patients with Early Inflammatory Arthritis Monitored with Quantitative Analysis of Dynamic Contrast-enhanced Optical Imaging and MR Imaging

Meier R, Thuermel K, Noël PB, Moog P, Sievert M, Ahari C, Nasirudin RA, Golovko D, Haller B, Ganter C, Wildgruber M, Schaeffeler C, Waldt S, Rummeny EJ.

[Radiology 2014; 270: 176-85](#)

Fluorescence optical imaging as a novel technique for visualization of inflammation in patients with systemic sclerosis with Raynaud's phenomenon: a pilot study.

Pfeil A, Drummer KF, Oelzner P, Boettcher J, Jung C, Wolf G.

[Ann Rheum Dis 2014; 73:1279-1280](#)

Detection of clinically manifest and silent synovitis in the hands and wrists by fluorescence optical imaging.

Kisten Y, Györi N, af Klint E, Rezaei H, Levitsky A, Karlsson A, van Vollenhoven R.

[RMD Open 2015;1:e000106. doi:10.1136/rmdopen-2015-000106](#)

The Application of Fluorescence Optical Imaging in Systemic Sclerosis.

Pfeil A, Drummer KF, Böttcher J, Jung C, Oelzner P, Renz DM, Franz M, Hansch A, Wolf G

[BioMed Research International, 2015, Article ID 658710](#)

Near-infrared Fluorescence Optical Imaging in Early Rheumatoid Arthritis: A Comparison to Magnetic Resonance Imaging and Ultrasonography.

Krohn M, Ohrndorf S, Werner SG, Schicke B, Burmester GR, Hamm B, Backhaus M, Hermann KG

[J Rheumatol. 2015 Jul;42\(7\):1112-8.](#)

Analysis of distribution and severity of inflammation in patients with osteoarthritis compared to rheumatoid arthritis by ICG-enhanced fluorescence optical imaging and musculoskeletal ultrasound: a pilot study.

Glimm AM, Werner SG, Burmester GR, Backhaus M, Ohrndorf S

[Ann Rheum Dis. 2015 Aug 26. doi: 10.1136/annrheumdis-2015-207345.](#) [Epub ahead of print]

The association between endothelial microparticles and inflammation in patients with systemic sclerosis and Raynaud's phenomenon as detected by functional imaging.

Jung C, Drummer K, Oelzner P, Figulla HR, Boettcher J, Franz M, Betge S, Foerster M, Wolf G, Pfeil A

[Clin Hemorheol Microcirc. 2015 Jul 22. \[Epub ahead of print\]](#)

Abstracts

EULAR

XIRALITE, A NEW METHOD FOR VISUALIZATION OF INFLAMMATION IN FINGER- AND WRIST – JOINTS

S. Werner, H.-E. Langer, B. Kurtz, G. Lind-Albrecht, M. Bahner

Annals of Rheumatic Disease 2010: [Ann Rheum Dis \(2010\) 69 \(Suppl3\): 120](#)

COMPARISON OF XIRALITE WITH CLINICAL EXAMINATION AND ULTRASONOGRAPHY - POSTER TOURS

S. Werner, S. Ohrndorf, H.-E. Langer, M. Bahner, C. Schwenke, G.R. Burmester, M. Backhaus

Annals of Rheumatic Disease 2011: [Ann Rheum Dis 2011;70\(Suppl3\):361](#)

COMPARISON OF XIRALITE WITH CLINICAL EXAMINATION AND ULTRASONOGRAPHY

S. Werner, S. Ohrndorf, H.-E. Langer, M. Bahner, C. Schwenke, G.R. Burmester, M. Backhaus

Annals of Rheumatic Disease 2011: [Ann Rheum Dis 2011;70\(Suppl3\):361](#)

COMPARISON OF XIRALITE WITH CLINICAL EXAMINATION AND MRI

S. Werner, P. Schott, M. Bahner, C. Schwenke, B. Kurtz, H.-E. Langer

Annals of Rheumatic Disease 2011: [Ann Rheum Dis 2011;70\(Suppl3\):555](#)

IMAGE PATTERN IN FLUORESCENCE OPTICAL IMAGING OF THE HANDS: DOES XIRALITE SUPPORT DIFFERENTIAL DIAGNOSIS? A FEASIBILITY STUDY

M. Bahner, C. Schwenke, M. Schirner

Annals of Rheumatic Disease 2012: [Ann Rheum Dis 2012;71\(Suppl3\):300](#)

THERANOSTIC APPROACH IN ARTHRITIS: A FEASIBILITY STUDY IN RATS

P. Welker, K. Licha, I. Gemeinhardt, M. Bahner, J. Berger, D. Mangoldt, J. Schnorr, M. Schirner

Annals of Rheumatic Disease 2012: [Ann Rheum Dis 2012;71\(Suppl3\):494](#)

SEMIQUANTITATIVE ASSESSMENT OF INFLAMMATION IN ARTHRITIS PATIENTS WITH INDOCYANINE GREEN ENHANCED OPTICAL IMAGING USING FOR MONITORING OF TREATMENT RESPONSE

S.G. Werner, H.-E. Langer, F. Spiecker S. Mettler, G. Lind-Albrecht, C. Hermsen, M. Backhaus

Annals of Rheumatic Disease 2012: [Ann Rheum Dis 2012;71\(Suppl3\):712](#)

VISUALIZATION OF REMISSION OF ARTHRITIS UNDER TNF-INHIBITION IN A PATIENT WITH JUVENILE IDIOPATHIC ARTHRITIS USING ICG-ENHANCED FLUORESCENCE OPTICAL IMAGING

S.G. Werner, H.-E. Langer, M. Backhaus, G. Horneff

Annals of Rheumatic Disease 2012: [Ann Rheum Dis 2012;71\(Suppl3\):706](#)

METHOD FOR AUTOMATED, COMPUTER-BASED QUANTITATIVE ASSESSMENT OF FLUORESCENCE OPTICAL IMAGING (FOI)

M. Schirner, M. Cziumplik, M. Bahner, J. Berger

Annals of Rheumatic Disease 2012: [Ann Rheum Dis 2012;71\(Suppl3\):711](#)

COMPARISON OF ICG-ENHANCED OPTICAL IMAGING TO LOW-FIELD MRI AND MUSCULOSKELETAL ULTRASOUND IN PATIENTS WITH EARLY RHEUMATOID ARTHRITIS

S. Ohrndorf, M. Krohn, S.G. Werner, M. Bahner, M. Schirner, B.E. Reiche¹, S. Schneider, L. Braum, G.R. Burmester, B. Hamm, K.-G. Hermann, M. Backhaus

Annals of Rheumatic Disease 2012: [Ann Rheum Dis 2012;71\(Suppl3\):712](#)

ICG-ENHANCED FLUORESCENCE OPTICAL IMAGING REVEALS SUBCLINICAL DISEASE ACTIVITY IN RHEUMATOID AND PSORIATIC ARTHRITIS PATIENTS WHO HAVE ACHIEVED CLINICAL REMISSION

F. Spiecker, S.G. Werner, C. Hermsen, M. Bahner, M. Backhaus, H.-E. Langer

Annals of Rheumatic Disease 2012: [Ann Rheum Dis 2012;71\(Suppl3\):298](#)

ICG-ENHANCED FLUORESCENCE OPTICAL IMAGING IN CLINICAL REMISSION: LONGITUDINAL DATA IN RA AND PSA PATIENTS WITH PRE/POST COMPARISONS

S.G. Werner, F. Spiecker, C. Hermsen, M. Bahner, M. Backhaus, H.-E. Langer

Annals of Rheumatic Disease 2012: [Ann Rheum Dis 2012;71\(Suppl3\):605](#)

INTERREADER-RELIABILITY OF STANDARDIZED EVALUATION OF ICG-ENHANCED FLUORESCENCE-OPTICAL IMAGING

S.G. Werner, U. Käßer, C. Amberger, M. Piesga, F. Spiecker, C. Volberg, C. Schwenke, H.-E. Langer,

M. Backhaus. Annals of Rheumatic Disease 2012: [Ann Rheum Dis 2012;71\(Suppl3\):613](#)

TREATMENT MONITORING OF FLUORESCENCE OPTICAL IMAGING (FOI) USING AUTOMATED, COMPUTER-BASED QUANTITATIVE ASSESSMENT

M. Bahner, S. Werner, M. Cziumplik, J. Berger, H-E. Langer, M. Schirner

Annals of rheumatic Disease 2013: [Ann Rheum Dis 2013;72 \(Suppls3\):1012](#)

ICG-ENHANCED FLUORESCENCE OPTICAL IMAGING (FOI) DETECTS TYPICAL INFLAMMATORY CHANGES IN SUBJECTS WITH ARTHRALGIA AND PSORIASIS

S. G. Werner, F. Spiecker, S. Mettler, G. Lind-Albrecht, O. Wiemann, G. R. Burmester, M. Backhaus, H.-E. Langer

Annals of Rheumatic Disease 2013; [Ann Rheum Dis 2013;72 \(Suppls3\): 759](#)

ICG-ENHANCED FLUORESCENCE OPTICAL IMAGING DETECTS TYPICAL INFLAMMATORY CHANGES IN ASYMPTOMATIC SUBJECTS WITH ELEVATED RHEUMATOID FACTOR OR ANTI-CCP ANTIBODIES

S. G. Werner, F. Spiecker, O. Wiemann, S. Mettler, G. R. Burmester, M. Backhaus, H.-E. Langer

Annals of Rheumatic Disease; [Ann Rheum Dis 2013;72 \(Suppls3\): 1019](#)

COMPARISON OF ICG-ENHANCED FLUORESCENCE OPTICAL IMAGING AND MUSCULOSKELETAL ULTRASOUND IN PATIENTS WITH RHEUMATOID ARTHRITIS AND OSTEOARTHRITIS

A.-M. Glimm, S. G. Werner, S. Ohrndorf, C. Schwenke, G. Schmittat, G. R. Burmester, M. Backhaus

Annals of Rheumatic Disease; [Ann Rheum Dis 2013;72 \(Suppls3\): 1005](#)

CLINICALLY "SILENT" SYNOVITIS: DETECTED BY FLUORESCENCE OPTICAL IMAGING OF THE HANDS & WRISTS

Y. Kisten¹, N. Györi¹, H. Rezaei¹, A. Karlsson², C. Romanus², E. af Klint², R. van Vollenhoven

Annals of Rheumatic Disease; [Ann Rheum Dis 2014;73\(Suppl2\): AB1024](#)

FLUORESCENCE OPTICAL IMAGING OF INFLAMMATION IN SYSTEMIC SCLEROSIS – A PILOT STUDY

A. Pfeil¹, K. F. Drummer¹, J. Boettcher², C. Jung³, P. Oelzner¹, G. Wolf

Annals of Rheumatic Disease; [Ann Rheum Dis 2014;73\(Suppl2\): AB0609](#)

THE DIAGNOSTIC UTILITY OF FLUORESCENCE OPTICAL IMAGING IN EVALUATING SYNOVITIS OF THE HANDS AND WRISTS

N. Gyzri¹, Y. Kisten¹, H. Rezaei¹, A. Karlsson², C. Romanus², E. af Klint², R. van Vollenhoven

Annals of Rheumatic Disease; [Ann Rheum Dis 2014;73\(Suppl2\): SAT0223](#)

THE DETECTION OF MICROCIRCULATION DISTURBANCES IN BOTH HANDS OF PATIENTS WITH SYSTEMIC SCLEROSIS USING FLUORESCENCE OPTICAL IMAGING

S. Friedrich, S. Riemekasten, S. Werner, G. Schmittat, G. R. Burmester, G. Riemekasten, S. Ohrndorf, M. Backhaus

Annals of Rheumatic Disease; [Ann Rheum Dis 2014;73\(Suppl2\): AB1019](#)

THE EXTRAARTICULAR PATTERNS OF ICG-ENHANCED FLUORESCENCE OPTICAL IMAGING IN PSORIATIC ARTHRITIS

O. Wiemann¹, S. G. Werner², H. Röver¹, G. Lind-Albrecht¹, S. Mettler¹, M. Backhaus³, H. E. Langer

Annals of Rheumatic Disease; [Ann Rheum Dis 2014;73\(Suppl2\): OP0051](#)

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SENSITIVITY AND SPECIFICITY OF INDOCYANINE GREEN ENHANCED OPTICAL IMAGING (XIRALITE) IN COMPARISON TO MAGNETIC RESONANCE IMAGING AND ULTRASONOGRAPHY.

Stephanie G. Werner, Peter Schott, Sarah Ohrndorf, Carsten Schwenke, Malte Bahner, Bernward Kurtz, Marina Backhaus, Gerd R. Burmester and Hans-Eckhard Langer
Arthritis & Rheumatism 2011: 63 (10); S73 - [ACR 2011: 198](#)

INDOCYANINE GREEN ENHANCED OPTICAL IMAGING USING FOR MONITORING OF TREATMENT RESPONSE.

Stephanie G. Werner, Felicitas Spiecker, Sabine Mettler, Gudrun Lind-Albrecht, Carsten Schwenke and Hans-Eckhard Langer
Arthritis & Rheumatism 2011: 63 (10); S73 - [ACR 2011: 199](#)

COMPARISON OF AUTOMATED, COMPUTER-BASED ASSESSMENT AND VISUALLY ASSESSED DISEASE ACTIVITY SCORES IN ICG-ENHANCED FLUORESCENCE OPTICAL IMAGING IN PATIENTS WITH RHEUMATIC DISORDERS: A FEASIBILITY STUDY.

Stephanie G. Werner, Michael Schirner, Hans-Eckhard Langer, Mathias Cziumplik, Jörn Berger, Marina Backhaus and Malte Bahner
[Arthritis & Rheumatism 2012: 64 \(10\); S56](#) – ACR 2012: 129

QUANTITATIVE ASSESSMENT OF SYNOVITIS IN PATIENTS WITH RHEUMATOID ARTHRITIS USING FLUORESCENCE OPTICAL IMAGING.

Valentin S. Schäfer, Wolfgang Hartung, Patrick Hoffstetter, Jörn Berger, Martina Müller, Martin Fleck and Boris P. Ehrenstein
[Arthritis & Rheumatism 2012: 64 \(10\); S56](#) – ACR 2012: 128

THE UTILITY OF FLUORESCENCE OPTICAL IMAGING FOR DETECTING CLINICALLY SILENT SYNOVITIS OF THE HANDS AND WRISTS.

Yogan Kisten, Noémi Györi, Hamed Rezaei, Anna Karlsson, Carolina Romanus, Ronald van Vollenhoven and Erik af Klint
[Arthritis & Rheumatism 2013: 65\(10\); S839](#) – ACR 2013: 1970

THE UTILITY OF DIGITAL ACTIVITY FLUORESCENCE OPTICAL IMAGING IN QUANTIFYING HAND AND WRIST INFLAMMATION IN RHEUMATIC DISEASES.

Yogan Kisten, Noémi Györi, Hamed Rezaei, Adrian Levitsky, Anna Karlsson, Erik af Klint and Ronald van Vollenhoven
[Arthritis & Rheumatology 2014: 66\(11\); S930](#) – ACR 2014: 2126

SENSITIVITY AND SPECIFICITY OF THE “GREEN NAIL” SIGN IN FLUORESCENCE OPTICAL IMAGING IN PSORIATIC ARTHRITIS.

Oliver Wiemann, Stephanie G. Werner, Hannah Röver, Gudrun Lind-Albrecht, Sabine Mettler, Marina Backhaus and Hans-Eckhard Langer
[Arthritis & Rheumatology 2014: 66\(11\); S931](#) – ACR 2014: 2129

NON-RESPONSE TO ANTITNF TREATMENT IN PSORIATIC ARTHRITIS CAN BE PREDICTED BY AN OBJECTIVE AUTOMATED MEASUREMENT OF FLUORESCENCE-SIGNAL INTENSITIES IN FLUORESCENCE-OPTICAL IMAGING TECHNIQUE – THE FIRST INTERIMS ANALYSIS OF THE XPLORE-STUDY

Koehm M, Rossmannith T, Henkemeier U, Aries P, Alten R, Langer H-E, Burkhardt H, Behrens F
[Arthritis Rheumatol. 2015; 67 \(suppl 10\) – ACR 2015: 2855](#)

INDOCYANINE GREEN (ICG) -ENHANCED FLUORESCENCE OPTICAL IMAGING (FOI) IN PATIENTS WITH ACTIVE RHEUMATOID ARTHRITIS; A COMPARATIVE STUDY WITH ULTRASOUND AND ASSOCIATION WITH BIOMARKERS

Kawashiri S, Nishino A, Umeda M, Fukui S, Nakashima Y, Iwamoto N, Ichinose K, Nakamura H, Origuchi T, Aoyagi K, Kawakami A
[Arthritis Rheumatol. 2015; 67 \(suppl 10\) – ACR 2015: 189](#)

COMPARISON OF BONE SCAN WITH XIRALITE (FOI) IN PATIENTS WITH RHEUMATOID ARTHRITIS AND PSORIATIC ARTHRITIS

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[Arthritis Rheumatol. 2015; 67 \(suppl 10\) – ACR 2015: 192](#)