Brigham and Women's Hospital December 2021 - Issue 19

BRASS NEWSLETTER

A SPECIAL NOTE FROM THE DIRECTORS:

We would first like to say thank you to all of you who have loyally participated in the BRASS registry for almost eighteen years! BRASS has become one of the most comprehensive RA cohorts in the country because of your devotion to the study. We are excited to be entering into the eighteenth year of study follow-ups!

These past several months have proved to be trying times for us all. The COVID-19 pandemic has led to changes in many aspects of our lives and we as a research study at Brigham and Women's Hospital have needed to adapt to a new normal. Your health and well-being continue to be a priority, even more so now during these unprecedented times.

We wanted to take a moment and explain how we are transitioning to our normal study visit procedures to ensure that your risk to exposure remains as minimal as possible. You will continue to have the option of answering our questionnaires over the phone to decrease multiple in-person interactions. We are continuing putting hold on obtaining blood sample from you if you come into the clinic for your rheumatology appointment.

BRASS will be continuing its study and those of you interested in continuing to increase the understanding of risk factors, comorbidities and outcomes associated with RA can re-consent to stay in the study another five years

Once again, we want to say how appreciative we are of your dedication to the BRASS registry. We look forward to working with you. Stay safe and healthy!

Sincerely,

Nancy A. Shadick, MD, MPH; Principal Investigator

Michael Weinblatt, MD; Principal Investigator

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LIFESTYLE AND CLINICAL RISK FACTORS FOR INCIDENT RHEUMATOID ARTHRITIS-ASSOCIATED INTERSTITIAL LUNG DISEASE

Vanessa L. Kronzer, Weixing Huang, Paul F. Dellaripa, Sicong Huang, Vivi Feathers, Bing Lu, Christine K. Iannaccone, Ritu R. Gill, Hiroto Hatabu, Mizuki Nishino, Cynthia S. Crowson, John M. Davis III, Michael E. Weinblatt, Nancy A. Shadick, Tracy J. Doyle, and Jeffrey A. Sparks

Rheumatoid arthritis (RA) can, in some circumstances, eventually evolve into RA-ILD (RA with associated interstitial lung disease.) RA-ILD has been found to have a prognosis of less than three years survival after diagnosis, compared with a much lower mortality rate in RA patients without ILD. A study was conducted at Brigham and Women's Hospital in Boston with the aim of identifying associations between novel (previously unobserved) lifestyle factors and their potential to increase risk of RA-ILD. It also looked to pinpoint a threshold at which cigarette smoking increases the risk of RA-ILD, and finally, to determine the extent to which known lifestyle and clinical factors can predict RA-ILD.

Obesity, CRP, functional status, and extensive smoking may be novel risk factors for RA-ILD that may be useful for RA-ILD risk assessment and prevention.

This study was designed as a nested case-control study; subjects were enrolled from the existing Brigham Rheumatoid Arthritis Sequential Study (BRASS), which is an ongoing, longitudinal, and prospective registry of patients with RA at the Brigham hospital. The study compared incident (new) cases of RA-ILD to RA non-ILD controls based of sex, age, rheumatoid factor, RA duration, and time from exposure assessment to RA-ILD. Exposure involved the following: BMI, education, race, smoking, anticyclic citrullinated peptide antibodies, joint erosions, C-reactive protein (CRP), rheumatoid nodules, functional status, disease activity score, disease-modifying antirheumatic drug use, and glucocorticoid use. Out of 1,100 cases from BRASS study, 84 cases of incident RA-ILD and 233 RA non-ILD controls were matched.

The factors found to be associated with an increased risk of RA-ILD after adjustment were the following: obesity, high level CRP, poor functional status. The smoking threshold of 30 pack years was found to be associated with increased risk of RA-ILD, compared with lower levels of smoking and never smokers. These results propose that a decrease and/or cessation of smoking, as well as weight loss, could help prevent RA-ILD. Similarly, CRP and functional status may also serve as novel risk factors for RA-ILD, but overall, these risk factors offer only moderate capacity to predict development of RA-ILD. The findings highlight the need for further research into risk factors for RA-ILD.

COVID-19 Booster Vaccine Research Study

in Patients with Rheumatoid Arthritis

WHAT WE ARE STUDYING:

- Immune response after receiving a COVID-19 booster vaccine
- Whether stopping or continuing medications affects vaccine immune response
- Safety and autoimmune disease flare after vaccination

ELIGIBILITY CRITERIA:

- Fully vaccinated for COVID-19
- Low antibody response to the initial vaccine course (to be tested at a research visit)
- Have not yet received a COVID-19 vaccine booster
- Diagnosis of **Rheumatoid Arthritis (RA)**
- Taking one of the following medications*:
  - **Mycophenolate mofetil** (Cellcept)
  - **Mycophenolic acid** (Myfortic)
  - **Methotrexate** (Rheumatrex, Trexall, Otrexup)
  - **Rituximab** (Rituxan, Truxima, Riabni)

**Taking additional medications to treat an autoimmune or other condition is permitted*

INTERVENTIONS:

- All of the participants will receive one vaccine booster dose of the same COVID-19 vaccine that was initially given
- If you are taking *methotrexate, mycophenolate mofetil*, or *mycophenolic acid* you will be randomized to withhold or continue taking your medication before and after receiving the booster vaccine

Fill out our pre-screen survey to participate:

https://redcap.link/covid_booster

STUDY VISITS:

- You will be screened for study eligibility at an in-person research visit
- Your immune response will be monitored during **7 in-person study visits over 13 months**
- All of the visits will take place at the **Brigham and Women's Hospital's Main Campus**
- You may receive up to $700 and parking for participating

ADDITIONAL PUBLICATIONS

The Clinical Disease Activity Index (CDAI) and the Routine Assessment of Patient Index Data3 (RAPID3) for Achievement of Treatment Strategies. *Kremer J, et al*

Divergence of Cardiovascular Biomarkers of Lipids and Subclinical Myocardial Injury Among Rheumatoid Arthritis Patients With Increased Inflammation. *Weber B, et al*

POS0454 Comparison of MBDA score, patient global assessment and evaluator global assessment for predicting risk of radiographic progression. *Calabrese L, Weinblatt ME, Shadick N, et al*

Validation of the adjusted multi-biomarker disease activity score as a prognostic test for radiographic progression in rheumatoid arthritis: a combined analysis of multiple studies. *Curtis J, Weinblatt ME, Shadick N, et al*

Data-Driven Patient Clustering and Differential Clinical Outcomes in BRASS.*Curtis J, et al*

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Visit our website at:

brassstudy.org

Follow the BRASS Study on Facebook!

https://www.facebook.com/brassstudy/

We will be posting study and staff updates, links to our newest research publications, and resources related to rheumatoid arthritis