between 327 to 2,540 unique peptides for each of the 3 species. MAB proteomic analysis identified between 17-74 unique peptides for each of the 3 subspecies. Fifteen different mixed preparations of MAC and MABC were then subjected to LCMS analysis and compared against the proteome profiles already curated for the six strains. We accurately identified at least one NTM in the majority of the samples (10/15). In three samples (3/15), the NTM was not correctly identified; in two of the samples (2/15) we were unable to determine the identity of NTM within the preparation. Further database curation will be performed to hone these results.

**DISCUSSION/SIGNIFICANCE OF FINDINGS:** Proteomic analysis of in vitro reference strains successfully demonstrated protein fingerprints specific to six common disease-causing strains of NTM. Such findings can be used to evaluate clinical samples enabling more efficient diagnostic specificity. Further research will focus on identification of NTM in sputum samples of infected patients.

**Precision Medicine**

**ABSTRACT IMPACT:** Glucocorticoid steroids are commonly used despite known dose-dependent cardiovascular toxicity, yet little is known about a) how patients with other cardiovascular risk factors use glucocorticoids, and b) how risks of glucocorticoid treatment might vary depending on a patient’s baseline cardiovascular risk. OBJECTIVES/GOALS: Up to one-third of RA patients use long-term glucocorticoids (GCs) despite a known, dose-dependent association with increased risk of major adverse cardiovascular events (MACE). We aim to evaluate patterns of GC use among RA patients with other MACE risk factors (i.e. diabetes, smoking), and examine how GC use may potentiate these risk factors. METHODS/STUDY POPULATION: We used claims data from Veterans Health Administration to identify 6,090 RA patients with MACE risk factors, and 5 MACE risk factors: hypertension, diabetes, smoking, and delayed gadolinium enhancement imaging. Additionally, free-breathing SENC images were obtained and then processed by a team of blinded cardiovascular imaging specialists using Myostrain software (Morrisville, USA). RESULTS/ANTICIPATED RESULTS: Among 2,884 eligible patients, 1,553 (54%) had MACE risk factors, and 97 (3%) had prior MACE (Table 1). Overall, 16% of patients recently used long-term GC, compared to 17% of patients with MACE risk factors, and 22% of patients with prior MACE. Incident MACE occurred in 308 (11%) patients, 24% of whom had recent long-term GC use. Recent long-term GC use was independently associated with increased incident MACE (Table 2). While no interaction term was statistically significant overall, differences in odds of incident MACE were seen across levels of recent GC use for several risk factors, particularly diabetes (OR 2.10, 95% CI [0.93-4.77]), tobacco use (OR 2.88, 95% CI [1.16-7.14]) and prior MACE (OR 2.41, 95% CI [0.73-7.95]). DISCUSSION/SIGNIFICANCE OF FINDINGS: Long-term GC use is common among RA patients with MACE risk factors. In this cohort, 25% of patients with incident MACE had recently used long-term GC. Long-term GC use may potentiate effects of comorbidities like diabetes and smoking, disproportionately increasing MACE risk in certain patients.