<table>
<thead>
<tr>
<th>Study</th>
<th>Study Type</th>
<th>Country</th>
<th>Population</th>
<th>No. of SSc COVID-19+ pts</th>
<th>Age</th>
<th>Sex</th>
<th>Auto-Ab’s</th>
<th>Comorbidities</th>
<th>COVID19 severity</th>
<th>Hospitalization</th>
<th>COVID-19 Rx</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mihai et al (1)</td>
<td>Case Report</td>
<td>Switzerland</td>
<td>n/a</td>
<td>1</td>
<td>57</td>
<td>F</td>
<td>TCZ</td>
<td>ILD, polyarthritis</td>
<td>DM, obesity</td>
<td>Mild</td>
<td>No</td>
<td>TCZ</td>
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<tr>
<td>Cheng et al (2)</td>
<td>Case Report</td>
<td>China</td>
<td>568 COVID-19 hospitalized pts</td>
<td>1</td>
<td>79</td>
<td>M</td>
<td>MTP</td>
<td>u/a</td>
<td>COPD</td>
<td>Critical</td>
<td>Yes</td>
<td>arbidol ribavirin IFN-γ TCZ IVIg HFNC</td>
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<tr>
<td>Avouac et al (3)</td>
<td>Case Series</td>
<td>France/Italy</td>
<td>n/a</td>
<td>3</td>
<td>71</td>
<td>M</td>
<td>PDN RTX</td>
<td>dcSSc, none</td>
<td>HTN, HLD</td>
<td>Severe</td>
<td>Yes (ICU)</td>
<td>ABX, NIV</td>
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<td>84</td>
<td>F</td>
<td>PDN RTX</td>
<td>lcSSc, polyarthritis</td>
<td>u/a</td>
<td>CKD, PE</td>
<td>Severe</td>
<td>Yes</td>
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<td>44</td>
<td>F</td>
<td>PDN MTX RTX</td>
<td>lcSSc, polyarthritis</td>
<td>RNA pol III</td>
<td>Thyroidectomy for goiter</td>
<td>Severe</td>
<td>Yes (ICU)</td>
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<tr>
<td>Moiseev et al (4)</td>
<td>Retrospective</td>
<td>Russia</td>
<td>902 ICU pts with COVID-19</td>
<td>2</td>
<td>65</td>
<td>F</td>
<td>u/a</td>
<td>dcSSc, ILD, GI system</td>
<td>u/a</td>
<td>MM</td>
<td>Severe</td>
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<td></td>
<td>66</td>
<td>F</td>
<td>u/a</td>
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<td>u/a</td>
<td>AF, CKD</td>
<td>Severe</td>
<td>Yes (ICU)</td>
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<tr>
<td>Favalli et al (5)</td>
<td>Survey</td>
<td>Italy</td>
<td>123 pts with CTD</td>
<td>1</td>
<td>32</td>
<td>F</td>
<td>RTX HCQ</td>
<td>u/a</td>
<td>ILD</td>
<td>u/a</td>
<td>Severe</td>
<td>Yes (ICU)</td>
</tr>
<tr>
<td>Zen et al (6)</td>
<td>Survey</td>
<td>Italy</td>
<td>916 pts with rheumatic disease, 176 with SSc</td>
<td>1</td>
<td>54</td>
<td>F</td>
<td>MMF</td>
<td>u/a</td>
<td>u/a</td>
<td>u/a</td>
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<tr>
<td>Gianfrancesco et al (7)</td>
<td>Registry</td>
<td>40 countries</td>
<td>600 rheumatic pts with COVID-19</td>
<td>16</td>
<td>u/a</td>
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<td>Pablos et al (8)</td>
<td>Retrospective</td>
<td>Spain</td>
<td>26,131 pts with rheumatic disease</td>
<td>1,14% of those with SSc</td>
<td>u/a</td>
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<tr>
<td>Study</td>
<td>Design</td>
<td>Country</td>
<td>Patients with COVID-19</td>
<td>Age</td>
<td>Gender</td>
<td>AutoAbs</td>
<td>ILD and PAH</td>
<td>Prior resection of a caecal malignancy</td>
<td>Outcome</td>
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<tr>
<td>Wan et al (9)</td>
<td>Retrospective</td>
<td>Malaysia</td>
<td>569</td>
<td>72</td>
<td>F</td>
<td>none</td>
<td>u/a</td>
<td>u/a</td>
<td>prior resection of a caecal malignancy</td>
<td>u/a</td>
<td>u/a</td>
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<tr>
<td>Bellan et al (10)</td>
<td>Retrospective</td>
<td>Italy</td>
<td>164</td>
<td>u/a</td>
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<td>u/a</td>
<td>u/a</td>
<td>u/a</td>
<td>Yes</td>
<td>u/a</td>
<td>R</td>
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</tr>
</tbody>
</table>

AF= atrial fibrillation, autoAb= autoantibodies, ATA= anti-topoisomerase, AZ= azithromycin, CKD= chronic kidney disease, COPD= chronic obstructive pulmonary disease, CTD = Connective tissue disease, D= death, dcSSc= diffuse SSc, DM= diabetes mellitus, GC= glucocorticoids, GI= gastrointestinal, HCQ = hydroxychloroquine, HFNC= high flow nasal cannula, HLD= hyperlipidemia, HTN= hypertension, ICU= intensive care unit, IFN= interferon, ILD= interstitial lung disease, IVIg = intravenous immunoglobulins, IcSSc= limited SSc, MMF= mycophenolate mofetil, MTP= methylprednisolone, MTX= methotrexate, n/a= not applicable, NIV = noninvasive ventilation, PAH= pulmonary arterial hypertension, PE= pulmonary embolism, pts= patients, PDN= prednisone, R= recovered, RNA pol III= ribonucleic acid polymerase III RTX= rituximab, Rx=treatment, SSc= Systemic sclerosis, TCZ= tocilizumab, u/a= unavailable
References


<table>
<thead>
<tr>
<th>Study</th>
<th>Main points</th>
</tr>
</thead>
</table>
| Bellan et al (1)              | Retrospective evaluation of telephone consultations with 164 SSc patients:  
  1. 17 patients reported worsening of Raynaud’s phenomenon  
  2. 9 reported onset of new digital ulcers  
  3. 18 with clinical worsening as measured by disease activity scale  
  As suggest by the findings, the advantages of delaying scheduled visits to prevent COVID-19 should be weighed against the potential risk of SSc-related clinical worsening. |
| Bozza Cassione et al (2)      | 1. Telemedicine is a valuable tool for evaluating patients especially during this pandemic.  
  2. Features of systemic sclerosis may be more insidious and must be addressed accordingly.  
  3. Identification of appropriate patients for telemedicine evaluation is essential.  
  4. A flexible approach is needed allowing for a prompt switch to in-person assessment when warranted.                                                   |
| Del Papa et al (3)            | 1. Based on WHO-defined risk factors, patients with SSc with lung disease or on chronic immunosuppression may be as increased risk of respiratory or life-threatening complications from SARS-CoV-2.  
  2. The anti-inflammatory effects of immunosuppression may actually decrease the clinical expression of COVID-19.  
  3. Future studies should address the clinical course and outcome of COVID-19 in SSc patients, focusing on those on chronic immunosuppressive therapies and those with pre-existing cardiac and pulmonary involvement. |
| Matucci-Cerini et al (4)      | 1. It is plausible that SSc patients treated with immunosuppressive drugs and/or with severe ILD might have a higher risk of developing a progressive COVID-19, and likely depends on baseline pulmonary involvement.  
  2. SSc patients are advised to continue chronic treatments unless they or a household member develop symptoms of COVID-19. If patient tests positive for infection, temporary holding of immunosuppressives is generally advised though should be determined on a case-by-case basis.  
  3. Limited medical visits are advised though should be decided individually.  
  4. In infected hospitalized SSc patients, preventative anticoagulation is advised.  
  5. The WSF and EUSTAR have launched an international database dedicated to describing SSc patients who have been infected with COVID-19. |
| Minniti et al (5) | 1. Patients with SSc may be at increased risk of severe COVID-19 because of the presence of lung disease and use of chronic immunosuppressives.  
2. The following proposed recommendations may assist in the care of SSc patients during this period:  
   a. Education regarding risk reducing techniques  
   b. Maintenance of home therapies  
   c. Keep open lines of communication  
   d. Hospital reorganization to prevent any COVID-19 exposures  
   e. Digital ulcer management at home  
   f. Home delivery medication dispensation |
|------------------|---------------------------------------------------------------------------------------------------------------|
| Orlandi et al (6) | 1. Patients with SSc are frail and the pandemic may cause psychological stress.  
2. It may be difficult to distinguish the lung changes related to SSc and to COVID-19.  
3. The pandemic may result in medication shortages.  
4. Timely diagnosis and psychological protection are critical during this period. |
| Thombs et al (7) | 1. Patients with pre-existing medical conditions are especially vulnerable to negative psychological outcomes during contagious disease outbreaks and related restrictions.  
2. The Scleroderma Patient-centered Intervention Network COVID-19 Home-isolation Activities Together (SPIN-CHAT) Trial is a randomized controlled trial to evaluate the effect of a videoconference-based program on symptoms of anxiety, depression, and loneliness among others in patients with SSc. |


