

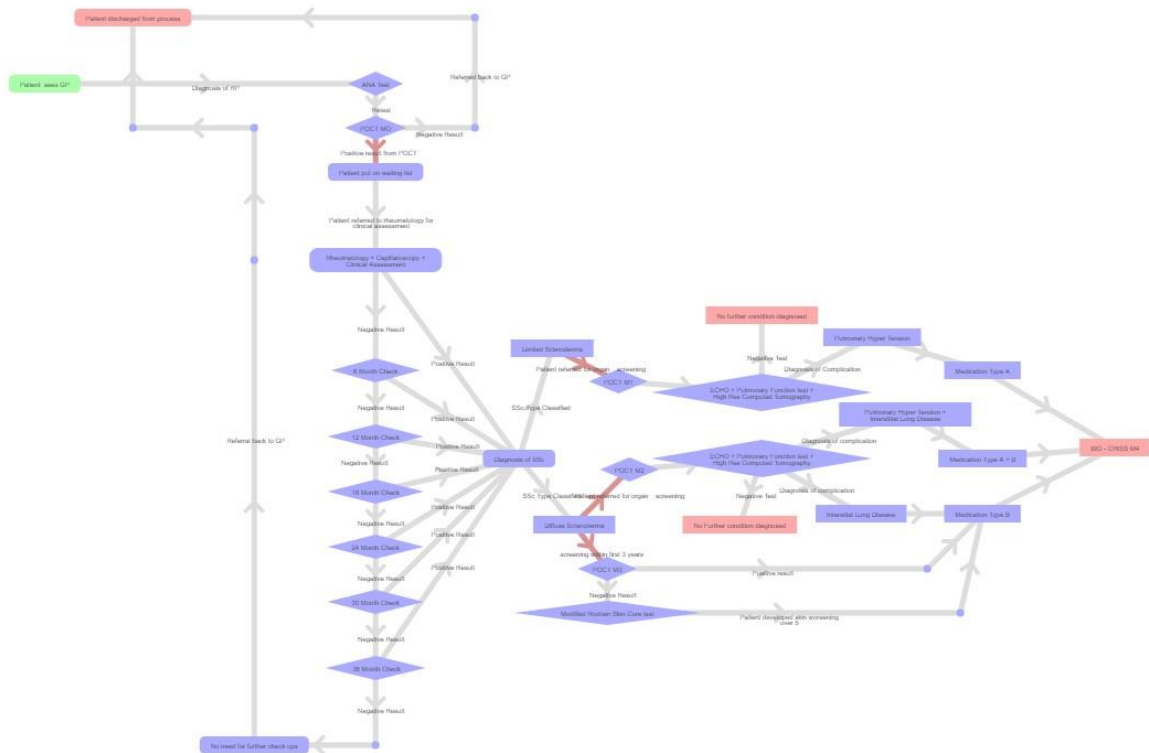
NETIMIS

REFERENCE DOCUMENT

Client: Diagnostic Evidence Co-operative Leeds

Pathway: Diagnosis of Scleroderma (Future State Pathway)

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Online at: <https://www.netimis.co.uk/shared/59807069d70a388c6eb3b199>

Brief

In collaboration with X-Lab and Diagnostic Evidence Co-operative (DEC) Leeds, this model above has been created to represent the future state pathway of patients with Scleroderma within Chapel Allerton Hospital with the implementation of a Point of Care Testing Device (POCT). This document provides detail of the settings specified in the NETIMIS model such as capacity, time, cost and probability.

Client

DEC Leeds facilitates the required research to enable the evaluation of diagnostic tests to provide benefits to the NHS in fields including urological, oncology, liver, musculoskeletal and colorectal diseases.

Working in partnership with DEC Leeds, is Chapel Allerton Hospital, who are a leading source in the investigation of Rheumatic and Musculoskeletal diseases. The Rheumatology department acts as a regional hub for the Yorkshire and Humber region. The department's main aim is to provide service for patients who have been diagnosed, or undergoing the diagnosis of Scleroderma. Scleroderma is an autoimmune and rheumatic disease that affects the body by hardening the skin and connective tissues.

Model

The model shows the implementation of the device within the current pathways to analyse the benefits and determine if it provides an improvement on the diagnosis of Scleroderma patients.

Overall Model Settings	
Population Size: 400	Estimation of average patient admittance over one year.
Time Unit: Weeks	Rationale: most appropriate time unit
Costs: Various assessment service bands	Based on cost assumptions over various sites and evidential costs stated by client in a meeting.

Patient Field Settings
No parameters were provided as part of patient field settings.

Pathway Settings				
Activity	Time (week)	Cost	Probability	C.I.*
Patient sees GP			Diagnosis of RP	5
Diagnosis of RP		£12	Patient given ANA Test	4
ANA Test			Retest	5
Retest			POCT M0	5
POCT M0			Negative Result – 38.5% Positive Result – 61.5%	5
IF Negative (ANA Test)			Referral back to GP	5
Referral back to GP			Patient discharged from process and referred to GP	5
IF Positive (ANA Test)			Patient put on waiting list	5
Patient put on waiting list			Patient referred to rheumatology for clinical assessment	5
Patient referred to rheumatology for clinical assessment	12		Rheumatology + Capillaroscopy + Clinical Assessment	2
Rheumatology + Capillaroscopy + Clinical Assessment			Negative Result – 64% Positive Result – 36%	5

IF Negative (Assessment) (Capacity: 400)		£605	6 Month Check	4
6 Month Check			Negative Result – 96% Positive Result – 4%	4
IF Positive (6 mth)		£80	Diagnosis of SSc	4
IF Negative (6 mth)		£80	12 Month Check	4
12 Month Check			Negative Result – 96% Positive Result – 4%	4
IF Positive (12 mth)		£80	Diagnosis of SSc	4
IF Negative (12 mth)		£250	18 Month Check	4
18 Month Check			Negative Result – 96% Positive Result – 4%	4
IF Positive (18 mth)		£250	Diagnosis of SSc	4
IF Negative (18 mth)		£80	24 Month Check	4
24 Month Check			Negative Result – 96% Positive Result – 4%	4
IF Positive (24 mth)		£80	Diagnosis of SSc	4
IF Negative (24 mth)		£250	30 Month Check	4
30 Month Check			Negative Result – 96% Positive Result – 4%	4
IF Positive (30 mth)		£250	Diagnosis of SSc	4
IF Negative (30 mth)		£80	36 Month Check	4
36 Month Check			Negative Result – 96% Positive Result – 4%	4
IF Positive (36 mth)		£80	Diagnosis of SSc	4
IF Negative (36 mth)	1	£250	No need for further check ups	4
No need for further check ups			Patient discharged from process and referred to GP	5
IF Positive (Assessment)		£605	Diagnosis of SSc	4
Diagnosis of SSc			Limited Scleroderma – 65% Diffuse Scleroderma – 35%	5

Limited Scleroderma Settings				
Activity	Time (week)	Cost	Probability	C.I.*
Classified as Limited Scleroderma			Patient referred for organ screening	5
Patient referred for organ screening			POCT M1	5
POCT M1		£896	ECHO + Pulmonary Function test + High Res Computed Tomography	4
ECHO + Pulmonary Function test + High Res Computed Tomography			Negative test– 85% Diagnosis of Complication– 15%	5
Negative test			No further condition diagnosed	5
Diagnosis of Complication			Pulmonary Hypertension	5
Pulmonary Hypertension			Prescribe Medication Type A	5
Medication Type A prescribed			BIO – CRISS M4	5

Diffuse Scleroderma Settings				
Activity	Time (week)	Cost	Probability	C.I.*
Classified as Diffuse Scleroderma			Patient referred for organ testing – 66.67% Screening within first 3 years – 33.33%	3
Patient referred for organ testing			POCT M2	5
POCT M2		£896	ECHO + Pulmonary Function test + High Res Computed Tomography	4
ECHO + Pulmonary Function test + High Res Computed Tomography			Negative test – 70% Interstitial Lung Disease – 15% Pulmonary Hypertension + Interstitial Lung Disease – 15%	5
Negative test			No further condition diagnosed	5

Interstitial Lung Disease			Prescribe Medication Type B	5
Medication Type B prescribed			BIO – CRISS M4	5
Pulmonary Hypertension + Interstitial Lung Disease			Prescribe Medication Type A + B	5
Medication Type A + B prescribed			BIO – CRISS M4	5
Screening within first 3 years			POCT M3	5
POCT M3			Positive result – 60% Negative result – 40%	3
Positive result			Prescribe Medication Type B	5
Medication Type B prescribed			BIO – CRISS M4	5
Negative result			Modified Rodnan Skin Core test	5
Modified Rodnan Skin Core test		£50	Patient developed skin worsening over 5	1
Patient developed skin worsening over 5			Prescribe Medication Type B	5
Medication Type B prescribed			BIO – CRISS M4	5

* C.I. is a Confidence Indicator for confidence in the evidence base used to construct the model based on a score of 1-5 with 5 being highest (0=No confidence/ not applicable; 1=Guess by Modeller; 2=Estimate from Domain Expert; 3=Empirical evidence for direct observation/ Extrapolation from published literature; 4=Multiple reliable sources; 5=Confirmed through Expert Review Board).