

## P1-53 - Distress Thermometer vs Emotion Thermometer in the Diagnosis of DSMIV defined Depression in Cancer Settings. A Large Scale UK Validation Study

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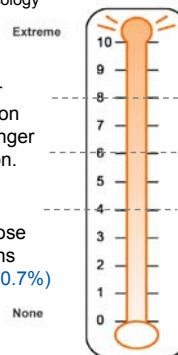
### OBJECTIVES

There has been much research on the value of the DT in screening for distress or depression in cancer settings. A meta-analysis suggested that the DT may lack specificity. We recently developed the Emotion Thermometer (ET) which builds on the success of the DT including distress, anxiety, depression and anger domains. Here we analysed the depression thermometer (DepT) and the DT against DSMIV Depression.

**METHODS** We analysed data collected from Leicester Cancer Centre from 2008-2009 involving approximately 1000 people approached by a research nurse and two therapeutic radiographers. Of those approached we collected data on 738 presentations, that is people seen up to three times over 9 months during treatment for cancer. We had complete data regarding depression in 447 people. Of these 48 (10.7%) had major depression and 121 (27.1%) had any depression (defined as major or minor combined).

**RESULTS** Initial logistic regression suggested that the DepT was most closely related to the diagnosis of any depression as well as major depression.

1. Distress



#### Logistic Regression - Any Depression

Distress Thermometer	b1 = -0.579	z = -1.153	P = 0.248
Distress Thermometer	b2 = 0.171	z = 1.623	P = 0.104
Anxiety thermometer	b3 = -0.006	z = -0.09	P = 0.926
Depression Thermometer	b4 = 0.234	z = 3.590	P = 0.000
Anger Thermometer	b5 = -0.013	z = -0.24	P = 0.808
Help Thermometer	b6 = 0.108	z = 1.89	P = 0.058

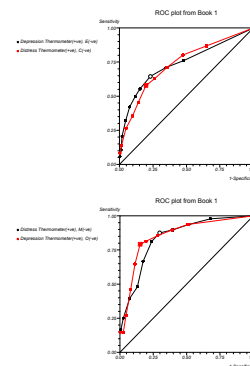
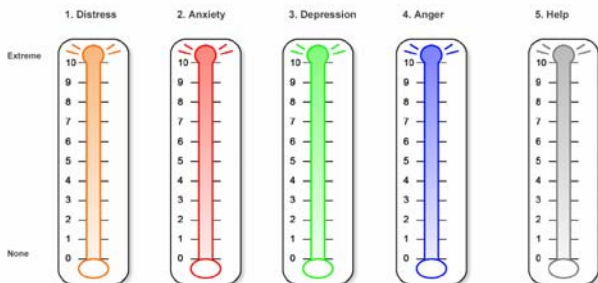
#### Logistic Regression - Major Depression

Distress Thermometer	b1 = 0.228	z = 1.798	P = 0.072
Anxiety thermometer	b2 = -0.082	z = -0.70	P = 0.478
Depression Thermometer	b3 = 0.278	z = 3.28	P = 0.001
Anger Thermometer	b4 = 0.009	z = 0.129	P = 0.897
Help Thermometer	b5 = 0.116	z = 1.522	P = 0.127

	Sensitivity	Specificity	PPV	NPV	AUC
<b>Any Depression</b>					
Distress thermometer (4v5)	0.578 (95%CI 0.48 to 0.67)	0.801 (95%CI 0.75 to 0.84)	0.52	0.84	0.734 (95%CI 0.68 to 0.79)
Depression thermometer (2v3)	0.644 (95%CI 0.55 to 0.73)	0.770 (95%CI 0.72 to 0.81)	0.51	0.85	0.739 (95%CI 0.68 to 0.79)
<b>Major Depression</b>					
Distress thermometer (3v4)	0.875 (95%CI 0.75 to 0.95)	0.701 (95%CI 0.65 to 0.75)	0.26	0.98	0.839 (95%CI 0.78 to 0.89)
Depression thermometer (4v5)	0.792 (95%CI 0.65 to 0.89)	0.849 (95%CI 0.81 to 0.88)	0.38	0.97	0.853 (95%CI 0.79 to 0.91)

#### Instructions

In the first four columns, please mark the number (0-10) that best describes how much emotional upset you have been experiencing in the past week, including today. In the final column please indicate how much you need help for these concerns.



**CONCLUSIONS** Diagnostic validity testing suggested a slightly superior AUC for DepT (vs DT) against major depression but equivalent accuracy against any depression. Sensitivity of the DepT was significantly higher than the DT in the diagnosis of MDD. Thus the DepT outperforms the DT against DSMIV major depression with better sensitivity, although the DT performs comparably against "any depression".

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