

# SCALES SCALES SCALES

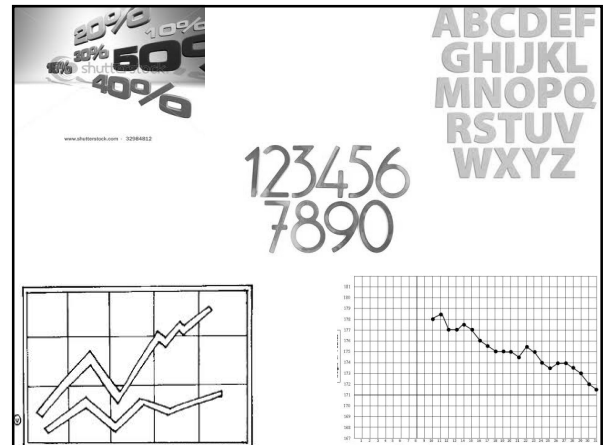
WHAT SHOULD THE RAINBOW  
FISH DO WITH ALL OF THESE SCALES??

Karen L. Cross, MD, FAAHPM



## Performance Scales

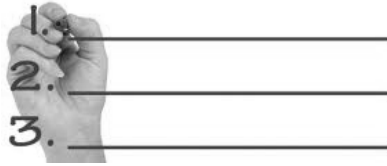
- KPS
- FAST
- ECOG
- PPS
- NYHA
- MRI
- ALSFRS



PPS = 30, 40, or 50  
ECOG = 2, 3, or 4  
NYHA = I, II, III, or IV  
FAST = 5 . . . . 7f  
KPS 70 . . . 20

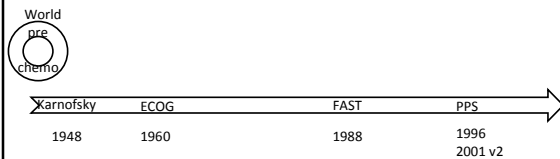


# Goals



- What is a performance scale ?

## Performance Scale timeline



## Karnofsky Performance Status Scale (KPS)

Karnofsky Performance Scale		
General category	%	Specific criteria
• Able to carry on normal activity	100	Normal general status - No complaint - No evidence of disease
• No special care needed	90	Able to carry on normal activity - Minor sign of symptoms of disease.
	80	Normal activity with effort, some signs or symptoms of disease.
• Unable to work	70	Able to care for self, unable to carry on normal activity or do work
• Able to live at home and care for most personal needs	60	Requires occasional assistance from others, frequent medical care
• Various amount of assistance needed	50	Requires considerable assistance from others, frequent medical care.
• Unable to care for self	40	Disabled, requires special care and assistance
• Requires institutional or hospital care or equivalent	30	Severely disabled, hospitalization indicated, death not imminent
• Disease may be rapidly progressing	20	Very sick, hospitalization necessary, active supportive treatment necessary
• Terminal states	10	Moribund
	0	Dead

## Eastern Cooperative Oncology Group (ECOG)

ECOG PERFORMANCE STATUS*	
Grade	ECOG
0	Fully active, able to carry on all pre-disease performance without restriction
1	Restricted in physically strenuous activity but ambulatory and able to carry out work of a light or sedentary nature, e.g., light house work, office work
2	Ambulatory and capable of all selfcare but unable to carry out any work activities. Up and about more than 50% of waking hours
3	Capable of only limited selfcare, confined to bed or chair more than 50% of waking hours
4	Completely disabled. Cannot carry on any selfcare. Totally confined to bed or chair
5	Dead

\* As published in Am. J. Clin. Oncol.: Oken, M.M., Creech, R.H., Tormey, D.C., Horton, J., Davis, T.E., McFadden, E.T., Carbone, P.P.: Toxicity And Response Criteria Of The Eastern Cooperative Oncology Group. Am J Clin Oncol 5:649-655, 1982.

## Dr. Akilu says .....

- The issue on performance status (measured by the ECOG or Karnofsky score) is complex

“Most clinical trials for solid tumor do only select those with excellent to good PS. For lung cancer trials limited to PS 1-2 so impact on survival for those of PS 2 unclear. One rule of thumb I follow is if PS 3-4 tend not offer chemo. Exceptions are the highly aggressive small cells ca where PS does not really matter in the initiation of chemo as well as certain heme malignancies.”



## ECOG interesting article

MD ECOG rating vs. Patient ECOG rating

109 patients  
Stg III or IV NSCLC

Study eligibility =  $\leq 1$

MD rated patients at a better functional level than patients rated themselves

## Palliative Performance Scale (PPS)



## Palliative Performance Scale (PPS)

PPS Level	Ambulation	Activity & Evidence of Disease	Self-care	Intake	Conscious level
100%	Full	Normal activity & work No evidence of disease	Full	Normal	Full
90%	Full	Normal activity & work Some evidence of disease	Full	Normal	Full
80%	Full	Normal activity with Effort Some evidence of disease	Full	Normal or reduced	Full
70%	Reduced	Unable Normal Job/Work Significant disease	Full	Normal or reduced	Full
60%	Reduced	Unable hobby/house work Significant disease	Occasional assistance necessary	Normal or reduced	Full or Confusion
50%	Mainly Sit/Lie	Unable to do any work Extensive disease	Considerable assistance required	Normal or reduced	Full or Confusion
40%	Mainly in Bed	Unable to do most activity Extensive disease	Mainly assistance	Normal or reduced	Full or Confusion
30%	Totally Bed Bound	Unable to do any activity Extensive disease	Total Care	Normal or reduced	Full or Drowsy
20%	Totally Bed Bound	Unable to do any activity Extensive disease	Total Care	Minimal to sips	Full or Drowsy
10%	Totally Bed Bound	Unable to do any activity Extensive disease	Total Care	Mouth care only	Drowsy or Coma
0%	Death	-	-	-	-

Mrs. S

82 yr-old with dementia

- walker to get the mail
- no longer able to knit or sew
- doesn't recognize grandchildren
- difficulty completing sentences
- Daughter has to occasionally help with dressing

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0%	Death	-	-	-	-

Mrs. S

- spends most of her day sitting in bed or a chair watching TV
- eating well
- incontinent of B & B
- daughter has to help to help her dress and shower daily

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0%	Death	-	-	-	-

Mrs. S

- chokes when fed (bites of jello or pudding)
- has to be lifted to a bedside chair

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0%	Death	-	-	-	-

Mrs. S

- Minimally responsive and unable to swallow
- Receiving continuous PEG feedings (2000cal/d)

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0%	Death	-	-	-	-

Mr. R

- 65 yr-old with lung CA mets to spine with cord compression and paraplegia
- up all day in a chair watching TV and using his telescope
  - eats well and feeds self
  - full use of hands and arms

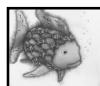
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0%	Death	-	-	-	-

## Is PPS the gold standard???

Ambulation and activity can be influenced by desire and support

Horizontal or down scoring – now can change levels to get a “best fit”



## Functional Assessment Staging Tool (FAST)

Stage*	Assessment
1	No difficulties, either subjectively or objectively
2	Complaints of forgetting location of objects; subjective word finding difficulties only
3	Decreased job functioning evident to coworkers; difficulty in traveling to new locations
4	Decreased ability to perform complex tasks (e.g., planning dinner for guests; handling finances; marketing)
5	Requires assistance in choosing proper clothing for the season or occasion.
6a	Difficulty putting clothing on properly without assistance
6b	Unable to bathe properly; may develop fear of bathing. Will usually require assistance adjusting bath water temperature
6c	Inability to handle mechanics of toileting (i.e., forgets to flush; doesn't wipe properly).
6d	Urinary incontinence, occasional or more frequent
6e	Fecal incontinence, occasional or more frequent
7a	Ability to speak limited to about half a dozen words to hold head up
7b	Intelligible vocabulary limited to a single word in an average day
7c	Nonambulatory (unable to walk without assistance)
7d	Unable to sit up independently
7e	Unable to smile
7f	Unable to hold head up

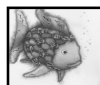
\*score is highest consecutive level of disability



## New York Heart Association Functional Class (NYHA)

	Symptoms
<b>Class I</b>	Cardiac disease but no limitation of physical activity. Ordinary activity does not cause undue fatigue, dyspnea, or anginal pain.
<b>Class II</b>	Mild limitation. Symptom free at rest. Ordinary activity may cause fatigue, dyspnea, or anginal pain that resolves with rest and results in only slight limitation of physical activity
<b>Class III</b>	Moderate limitation. Symptom free at rest. Ordinary activity is markedly limited by fatigue, dyspnea, or angina pain.
<b>Class IV</b>	Severe limitations. Symptoms cause inability to carry out any physical activity without discomfort. Fatigue, dyspnea, or angina may be present at rest. <u>ANY</u> physical activity increases discomfort.

last updated 3/4/94



## Mortality Risk Index Score

### Mortality Risk Index Score (Mitchell) months

### Risk estimate of death within 6

Points	Risk factor	Score	Risk %
1.9	Complete dependence with ADLs	0	8.9
1.9	Male gender	1-2	10.8
1.7	Cancer	3-5	23.2
1.6	Congestive heart failure	6-8	40.4
1.6	O2 therapy needed w/in 14 day	9-11	57.0
1.5	Shortness of breath	=12	70.0
1.5	<25% of food eaten at most meals		
1.5	Unstable medical condition		
1.5	Bowel incontinence		
1.5	Bedfast		
1.4	Age > 83 y		
1.4	Not awake most of the day		



### The MDS Mortality Risk Index – Revised (MMRI-R)

	Weight points
Admission to nursing home in the past three months	Yes <input type="checkbox"/> No <input type="checkbox"/> 0
Lost weight unintentionally in the last three months	Yes <input type="checkbox"/> No <input type="checkbox"/> 0
Renal failure	Yes <input type="checkbox"/> No <input type="checkbox"/> 0
Chronic heart failure	Yes <input type="checkbox"/> No <input type="checkbox"/> 0
Poor appetite	Yes <input type="checkbox"/> No <input type="checkbox"/> 0
Male	Yes <input type="checkbox"/> No <input type="checkbox"/> 0
Dehydrated	Yes <input type="checkbox"/> No <input type="checkbox"/> 0
Short of breath	Yes <input type="checkbox"/> No <input type="checkbox"/> 0
Cancer (if yes – see Age and Cancer worksheet; if no continue)	Yes <input type="checkbox"/> No <input type="checkbox"/> **
Age of patient/resident at last birthday _	Age score <b>without</b> cancer (2-5)
	Age score <b>with</b> cancer (10-20)
Deteriorated cognitive skills or status in the past three months	Yes <input type="checkbox"/> No <input type="checkbox"/> **
Activities of Daily Living score _	ADL score <b>without</b> cognitive decline (0-15)
(see ADL and cognitive decline worksheet)	ADL score <b>with</b> cognitive decline (1)
<b>TOTAL MMRI-R SCORE</b>	<b>(0-85)</b>



- ALS Functional Rating Scale
- Seattle Heart Failure Model
- Palliative Prognostic Score (PaP)
- Advanced Dementia Prognostic Tool (ADEPT)
- BODE Index
- Charlson Comorbidity Index
- Model for End Stage Liver Disease (MELD)
- APACHE

What should we do ??????

