BIOBEHAVIORAL PERSPECTIVES ON THE COMPLEX PATIENT

RISK FACTORS

Biological RISKS e.g. obesity

Behavioral RISKS e.g. smoking, sedentary lifestyle

Psychological RISKS e.g. depression, negative outlook

Social RISKS e.g. loneliness, isolation

*once sick, risk factors are exacerbated

the COMPLEX patient

*CO-MORBID
- 2 or more physical diseases
or
- 1 chronic disorder and then develops another due to common risk factors or iatrogenic effects of treatment for the first

CANCER & CVD: COMMON CO-MORBIDITIES

*many other conditions can ADD to complexity

67% OF CANCER PATIENTS OVER 65 HAVE ≥ ONE CARDIOVASCULAR CONDITION
-SEER Database

*SHARED RISK FACTORS
- smoking
- sedentary lifestyle
- obesity

*ADVERSE TREATMENT RISKS
e.g. cardiomyopathies from toxic cancer treatments

GIVEN THAT...

cancer & CVD share biobehavioral & biological risk factors and biopsychosocial researchers usually consider one disease at a time...

*WE RECOMMEND that BIOPSYCHOSOCIAL RESEARCHERS conduct integrated research on COMPLEX PATIENTS with CO- and MULTI-MORBIDITIES

MECHANISMS

RISK FACTORS influence ONE ANOTHER

BIOLOGICAL MECHANISMS
- HPA Activity
- SNS Activity
- Inflammation
- PNS Activity
- Immune response

CARDIOVASCULAR VULNERABILITY

HEALTH OUTCOMES

TUMOR PROGRESSION

EMERGING RESEARCH OPPORTUNITIES

- cancer & CVD share biobehavioral risk factors & appear to share some common pathways (e.g. inflammation). IS IT POSSIBLE to BUNDLE RISK FACTORS for BOTH DISEASE CATEGORIES?
- DO BIOPSYCHOSOCIAL FACTORS MODULATE the HPA and SNS IN BIOLOGICALLY RELEVANT WAYS that ALTER DISEASE COURSE for CANCER & CVD?
- IS THERE DISEASE SPECIFICITY (i.e. only certain types of CVD; certain types of cancer)?
- HOW DO the HPA and SNS AFFECT TISSUE ENVIRONMENTS RELEVANT to CANCER and CVD's?
- ARE the EFFECTS of HAVING CANCER & CVD on PSYCHOLOGICAL BURDEN, MORBIDITY, and LONGEVITY ADDITIVE or INTERACTIVE?
- SHOULD BIO-PSYCHOSOCIAL INTERVENTIONS MOVE BEHAVIORAL or BIOLOGICAL END POINTS; TARGET BOTH?

HPA - Hypothalamic-pituitary axis
CVD - Cardiovascular disease
SNS - Sympathetic nervous system
PNS - Parasympathetic nervous system