

Cancer survivors and ability to work: current knowledge and future research

Dr. Saskia Duijts

VU University Medical Center / Department of Public and Occupational Health
The Netherlands Cancer Institute / Division of Psychosocial Research and Epidemiology

Amsterdam, The Netherlands

Quote

“I was still undergoing treatment, just before my contract ended. My employer sent me a letter explaining that my contract would not be renewed. The only thing they did was wishing me good luck with finding a new job.”

Breast cancer survivor (42 years, temporary contract)

Outline

- History of cancer and work research
- Meaning of work
- Fact & Figures
- Factors related to return to work
- Interventions
- Examples of studies in breast cancer patients and survivors
- Future directions

History of cancer and work research



History cancer and work research

- Occupational cancer
 - Globally, 19% of all cancers are attributable to the environment, including work
 - Exposure situations carcinogenic to humans
 - Biological carcinogens
 - e.g., virus known to cause cancer
 - Chemical carcinogens
 - e.g., asbestos at the workplace
 - Physical carcinogens
 - e.g., UV radiation



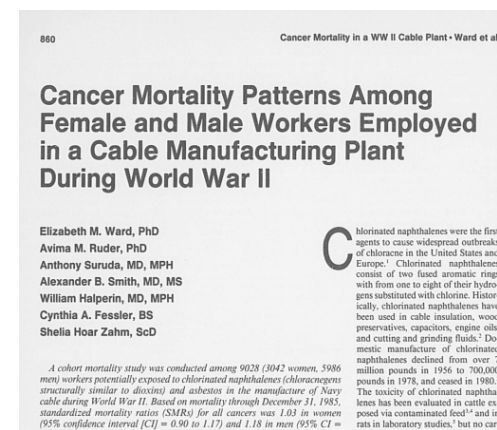
History cancer and work research

- Occupational cancer
 - Cancers associated with occupational exposure (among others):
 - Bladder cancer (arsenic, aromatic amines, coal tar); Bone cancer (ionising radiation); Brain cancer (ionising radiation); Leukaemia (benzene); Lung cancer (asbestos); Nasal cancer (chromium) and so on...



History cancer and work research

- Occupational cancer
 - 1951; Lung cancer in chromate workers
 - 1955; Urinary bladder cancer in asbestos textile workers and iron-ore miners
 - 1976; Metal material workers and lung cancer
 - 1994; Cancer mortality patterns among female and male workers in a cable manufacturing plant during World War II



History cancer and work research

- Occupational cancer
 - 2015; exposure to chromium in employees working for the Defense Ministry in the Netherlands



History – 70s

- Topic of interest for about 40 years
- Corresponds with the beginnings of psycho-oncology in the mid 1970s
 - First stigma: speaking about cancer became possible
 - Second stigma: negative attitude towards psychological problems diminished
- First studies related to occupational rehabilitation
- Early research mainly reported about job discrimination of cancer patients and denied access to life and health insurances.

History – 80s and 90s

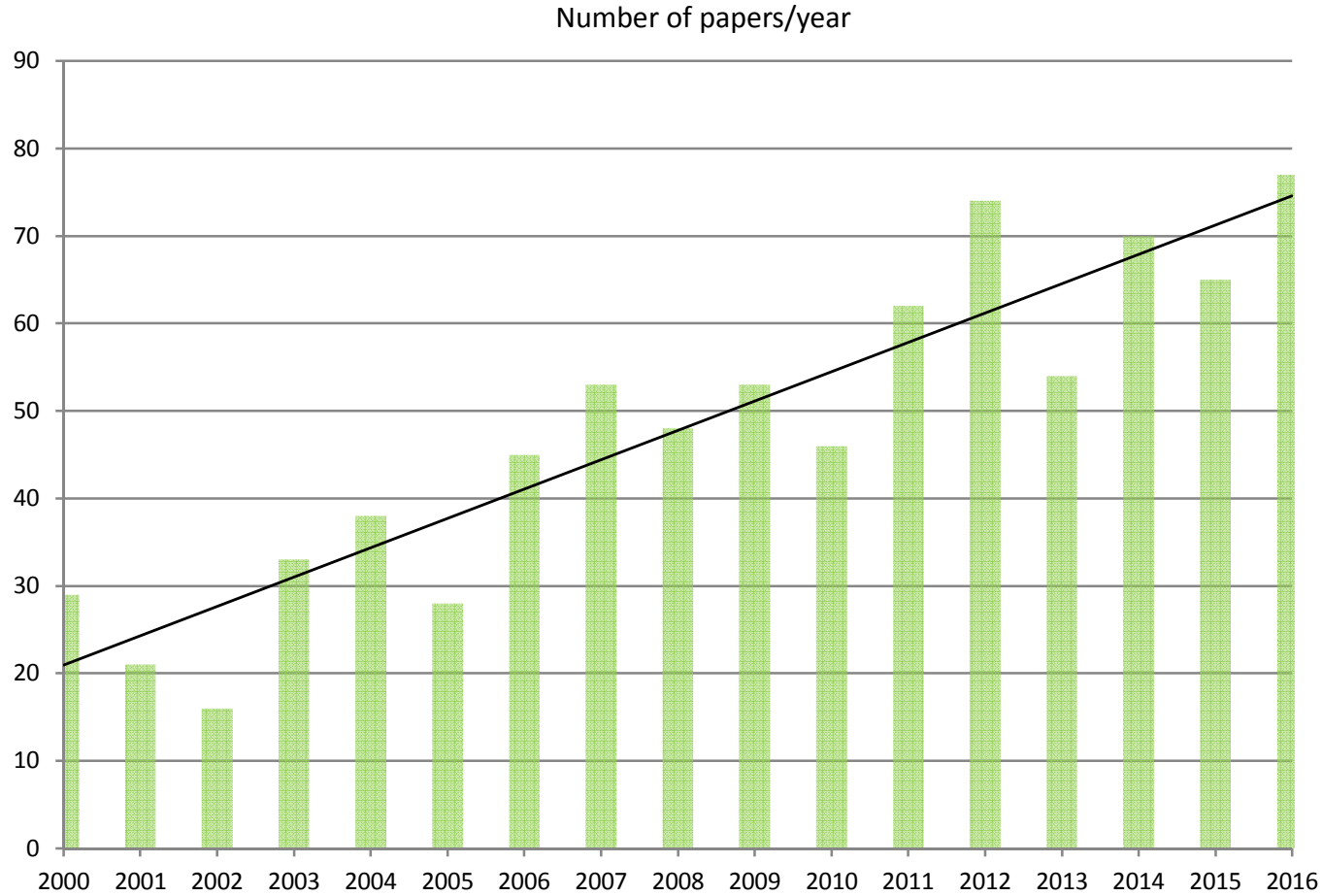
- Factors associated with return to work
- In 2002, Spelten et al published a literature review
 - 14 studies were included (from 1985 – 1999)
 - Factors were categorized into:
 - Work-related factors (e.g., the attitude of coworkers, accommodations at work)
 - Disease- or treatment-related factors (e.g., cancer site, cancer stage)
 - Person-related factors (e.g., socio-demographics)

History – 80s and 90s

- While disease and treatment have the most impact on return to work, managing cancer-related symptoms, such as fatigue and cognitive problems, can also influence work ability.
- Critical of the return to work research in this period
- All 14 studies suffered from methodological weaknesses



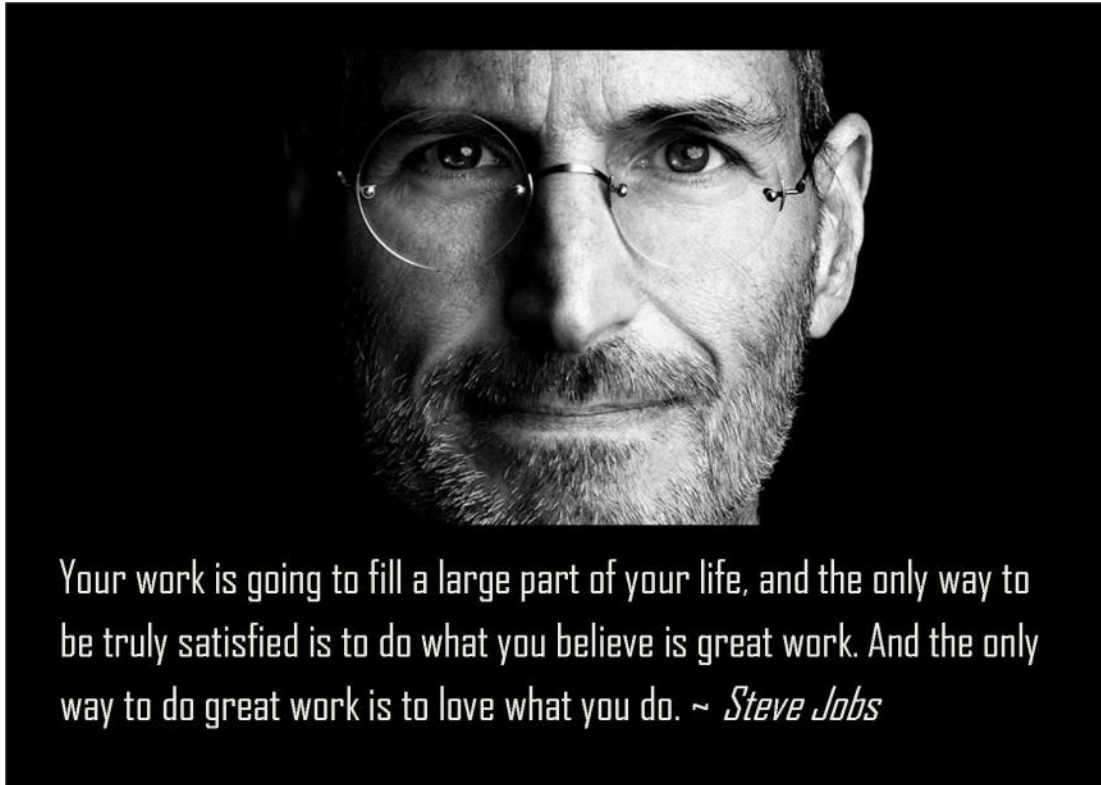
History – 2000 until present



History – 2000 until present

- Studies from the perspective of:
 - Patient / survivor (e.g., work ability, problems related to return to work)
 - Caregiver and family (e.g., burden and (work-related) consequences of care, financial problems)
 - Employer / coworkers (e.g., working conditions, work load)
 - Health care providers (e.g., supportive care to return to work)
 - Community / society (e.g., economic and policy changes)

Meaning of work



Meaning of work

- Self-esteem, self-concept
- Social relationships
- Sense of normalcy
- Financial security
- Contribute to society
- Provide for oneself and loved ones



Both the fact that one has had cancer and the long-term physical and psychological consequences of diagnosis and treatment often lead individuals to renegotiate their relationship to work life.

Meaning of work

- Interview study
- Male participant, 59 years old



“When we were driving home after receiving the diagnosis, I said to my wife: ‘now, I am never going back to work again.’ ”

Facts & Figures



Facts & Figures – incidence

- Global
 - 12.7 million new cancer cases each year
 - 50% (about 6.5 million) of the cases are of working age
- Europe
 - 3.5 million new cancer cases
 - 50% (about 1.7 million) of the cases are of working age
- National (the Netherlands)
 - 105.000 new cancer cases each year
 - 40% (about 40.000) of the cases are of working age

Facts & Figures – percentages

- At 6 months after diagnosis → 40% (range 24 – 72%)
- At 12 months after diagnosis → 62% (range 50 – 81%)
- At 18 months after diagnosis → 73% (range 64 – 82%)
- At 24 months after diagnosis → 89% (range 84 – 94%)

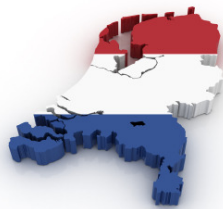
- At 5 years after diagnosis → 67% of patients was able to return to work

- Most cancer survivors are able to return to work

Facts & Figures – percentages

Breast cancer survivors:

- Trends in RTW differ among countries.
- The prevalence varies between 43% – 93% within one year after diagnosis.
- The prevalence of RTW in the Netherlands is the lowest (43%) and in the United States of America the highest (93%).



Facts & Figures – factors

- A substantial number of cancer survivors might benefit from help, advice, cancer-specific accommodations, and support on work issues.
- Information is required on factors associated with return to work and continuation of work.
- Knowledge regarding these factors can provide input for future interventions.

Factors – related to return to work

- Socio-demographic factors

- Gender

- Age

- Educational level



- Disease-related factors

- Cancer type

- Chemotherapy

- Surgery alone



E.g., Mehnert, Critical Review in Oncology – 2011

Factors – related to return to work

- Disease-related factors
 - Fatigue
 - Depression
 - Anxiety
 - Cognitive functioning
 - Problems with attention, concentration, and memory interfere with job performance, beyond return to work.
 - No significant association between cognitive functioning and return to work.



Factors – related to return to work

- Work-related factors
 - Type of work
 - Physical job demands
 - Perceived employer accommodation
 - Practical support from the workplace
- Survivor perspectives
 - Meaning of work
 - Coping skills
 - Social support



Taskila, Support Care Cancer – 2004; Banning, European Journal of Cancer Care – 2011

Factors – related to return to work

- Breast cancer patients and survivors: numerous barriers and facilitators were identified as factors that affect RTW.
 - Barriers
 - Socio-demographics (e.g., low educational level)
 - Disease- and treatment-related factors (e.g., poor health condition, fatigue, depression, chemotherapy)
 - Work-related factors (e.g., heavy physical work)
 - Facilitators
 - Social, family, employer support, and financial independency

Interventions



Interventions

- Psychological interventions (e.g., counseling)
- Physical interventions (e.g., exercise)
- Vocational interventions (e.g., job placement services)
- Occupational interventions (e.g., work adjustments)
- Legislative interventions (e.g., anti-discrimination, 'no-risk')
- Multidisciplinary interventions



Interventions – breast cancer

- Systematic review on interventions related to RTW in cancer patients and survivors (15 studies).
- Seven studies conducted in breast cancer patients and survivors:
 - Training of coping skills regarding RTW combined with physical exercises (Berglund, 1994).
 - A casemanager working in a multidisciplinary team referred breast cancer patients to physical, occupational or psychological support services (Hubbard, 2013).
 - Adjuvant endocrine therapy (Johnsson, 2007).

Interventions – breast cancer

- Comparison of conservation surgery to mastectomy (Lee, 1992).
- A nurse advised patients on exercise, examined arm movements, and encouraged RTW (Maguire, 1983).
- An individually supervised exercise session, face-to-face counseling sessions with an exercise specialist, and home-based exercises (Rogers, 2009).
- An oncology nurse or medical social worker working in a multidisciplinary team provided patients with vocational support, counseling, education and RTW advice (Tamminga, 2013).

Interventions

- Hardly any of these interventions (i.e., the way they have been investigated so far) showed significant effects.
- Most intervention programs aimed at improving, for example, quality of life, well-being or reducing fatigue.
- Work-related outcomes only included as a secondary outcome measure.



E.g., de Boer, Cochrane – 2015

Study examples

Deelname-nummer:

JOBS- vragenlijst

Job loss among
breast cancer survivors

▶ Een onderzoek naar de invloed van (de behandeling) van borstkanker op het werk.

Ook wanneer u helemaal niet werkt of gewerkt heeft willen we u graag een aantal vragen stellen. Wanneer u nog steeds ziek bent, of opnieuw ziek bent geworden, horen we ook graag uw mening en uw ervaringen. Uw gegevens zijn voor ons onderzoek erg belangrijk.

ANTONI VAN LEEUWENHOEK
LEUWENHOEK
ANTONI VAN LEEUWENHOEK

ANTONI VAN LEEUWENHOEK - NED. L.G.M. PIJKER 2012

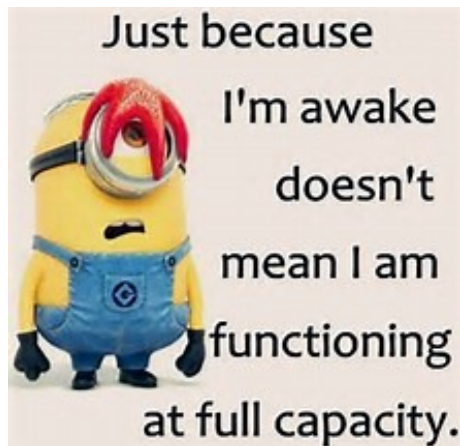
REVIEW

Systematic review

- Aim: to explore the association between functional impairments and work-related outcomes in breast cancer survivors.
- Background: successful RTW is influenced by the extent to which the cancer survivors' level of functioning meets the demands at work.
 - For example, breast cancer surgery might be associated with lymphedema, which in turn can impair arm function, and consequently may affect specific physical tasks at work.

Systematic review

- Findings from this systematic review might be used to develop interventions to help overcome the discrepancy between the level of functioning of breast cancer survivors and the demands of work.



Systematic review

Methods

- Databases PubMed, EMBASE, PsycINFO, CINAHL and the Cochrane Library were used.
- Studies published between January 2000 and March 2016 were included.
- All eligible studies had to evaluate functional impairments in relation to work-related outcomes in breast cancer survivors with an employment contract at time of diagnosis.
- Both qualitative and quantitative studies were included.

Systematic review

Results

- 995 studies identified through the systematic search and 3 by manual search.
- 957 studies were excluded based on title and abstract.
- 41 studies were retrieved for full-text screening.
- 21 studies were excluded because they did not meet the selection criteria.
- 20 studies included.



Systematic review

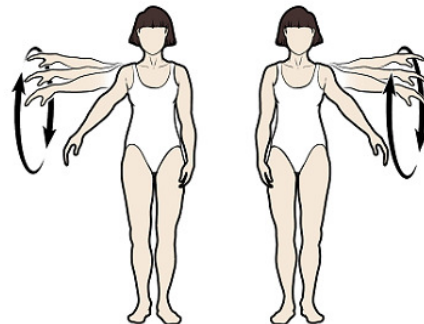
Results – quantitative studies (N = 11)

- General functioning (N = 3)
 - Physical functioning (N = 7) (e.g., shoulder functioning)
 - Cognitive functioning (N = 6) (e.g., mental work ability)
 - Social functioning (N = 2)
 - Emotional functioning (N = 3)
-
- Work-related outcomes: work ability, duration until RTW, employment status, sickness absence, working hours.

Systematic review

Results – quantitative studies (N = 11)

- Problems with physical functioning were associated with negative work outcomes.
- For example:
 - A higher proportion of breast cancer survivors with physical disabilities was not employed or had left the workforce at 12 and 18 months after diagnosis.
 - Problems with shoulder functioning were reported to impact RTW and work ability after RTW.



Systematic review

Results – quantitative studies (N = 11)

- Cognitive functioning was evaluated by means of performance based tests, and self-reported measures.
 - Those with low scores on performance based tests did not differ from those with high scores with regard to RTW and work output.
 - Findings from self-reported measures were inconsistent: some findings showed that those with higher levels of subjective cognitive impairments were more likely to be unemployed; other findings indicated that subjective cognitive functioning was not at all associated with work-related outcomes.

Systematic review

Results – qualitative studies (N = 9)

- Problems with mobility and executing physical tasks (e.g., carrying and walking) were reported to hamper RTW.

One woman said:

“I was the assistant manager of a convenience store and did a lot of heavy lifting. They did not take me back after my surgery.”



Bijker, submitted to JOR

Systematic review

Results – qualitative studies (N = 9)

- Breast cancer diagnosis and treatment were reported to affect emotional functioning, which influenced choices regarding RTW.

One woman explained:

“With this memory thing, I was very frustrated at work and so I thought: I can’t go on like this. It was a chore now going to work, rather than a joy. I just assessed the situation and said: it’s not worth it.”

Systematic review

Conclusion

- The findings of this systematic review indicate that functional impairments can severely hamper work participation in breast cancer survivors.
- (Occupational) health professionals should be supported in providing effective vocational guidance to improve work-related outcomes in breast cancer survivors.



JOBS study – qualitative

- Aim: to explore experiences regarding change in employment status in breast cancer survivors 5 – 10 years after diagnosis, and to identify barriers and facilitators regarding RTW or retaining work during this period.



JOBs study – qualitative

Background

- Most studies explore barriers and facilitators regarding RTW and assess employment status short-term after diagnosis, i.e., within the first two years.
- Hardly any information is present long-term after diagnosis.



JOBS study – qualitative

Methods

- Focus group interviews, semi-structured topic list
- Breast cancer survivors who participated in the quantitative part of the JOBS study
- 5 – 10 years after diagnosis
- Employment contract at time of diagnosis
- Treated at the Antoni van Leeuwenhoek hospital



van Maarschalkerweerd, in preparation

JOBS study – qualitative

Results

- Three focus groups were conducted (N = 7, N = 7, N = 5)
- Mean age: 51 years
- 58% in a relationship
- 94% moderate to high educational level
- At time of the focus group interviews, 53% was unemployed



JOBS study – qualitative

Results

Experienced changes in employment status

- Shortly after diagnosis and treatment, the majority of the women was able to RTW (N = 18)
- At time of the focus group interviews, more than half of the participants was unemployed (N = 10)

One woman said:

“I needed to RTW, because of financial necessities. But I was really tired.”

JOBS study – qualitative

Results

Facilitators for RTW

- Shortly after diagnosis, women indicated the support of colleagues and/or the employer as an important facilitator to RTW or stay at work.
- At time of the focus group interviews, women experienced that ongoing flexibility (e.g., in working hours) facilitated their work ability.

JOBS study – qualitative

Results

Meaning of work

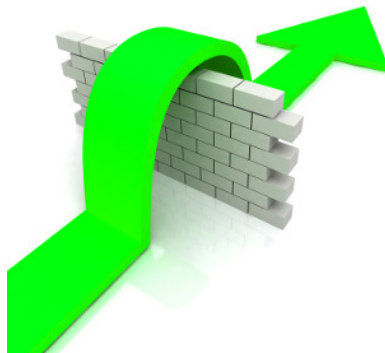
- At time of diagnosis, being able to work was important because of financial reasons and because it gave them back a sense of normalcy. But overall, work did not have major priority around that time.
- At time of the focus group interviews, work mainly had a social and a financial meaning.

One woman explained: *“I still receive unemployment benefits, which I believe is a problem, because I do not want to depend on my husband’s salary.”*

JOBS study – qualitative

Conclusion

- Breast cancer survivors are still experiencing changes in employment status 5 – 10 years after diagnosis.
- Barriers and facilitators regarding RTW and continuation of work change over time and should be taken into account by (occupational) health care professionals.



JOBS study – quantitative

- Aim: to assess the effects of breast cancer and its treatment on employment and social benefits in breast cancer survivors, diagnosed before age 55 up to ten years after diagnosis.



Employment and social benefits up to 10 years after breast cancer diagnosis: a population-based study

C H Paalman¹, F E van Leeuwen¹, N K Aaronson¹, A G E M de Boer², L van de Poll-Franse^{3,4}, H S A Oldenburg⁵ and M Schaapveld^{*,1,3}

¹Division of Psychosocial Research and Epidemiology, The Netherlands Cancer Institute, Amsterdam, The Netherlands; ²Coronel Institute of Occupational Health, Academic Medical Center, Amsterdam, The Netherlands; ³Netherlands Comprehensive Cancer Organisation (IKNL), Utrecht, The Netherlands; ⁴CoRPS- Centre of Research on Psychology in Somatic Diseases, Department of Medical and Clinical Psychology, Tilburg University, The Netherlands and ⁵Department of Surgical Oncology, The Netherlands Cancer Institute, Amsterdam, The Netherlands

JOBS study – quantitative

Methods

- Data of 26,120 breast cancer survivors (identified through the Netherlands cancer registry) were used.
- Link with individual social security data (Statistics Netherlands), which included data on individual income, receipt of disability benefits, unemployment benefits and welfare.
- A general population control sample was formed (N = 91,593)

JOBS study – quantitative

Results

- This study showed that breast cancer survivors experienced:
 - an increased risk of obtaining disability benefits up to ten years after diagnosis
 - an increased risk of loss of paid employment up to seven years after diagnosis
 - an increased risk of obtaining unemployment benefits up to five years after diagnosis.

JOBS study – quantitative

Conclusion

- Many breast cancer survivors will experience work-related problems both short-term and long-term after diagnosis. Considering the fact that work is an important aspect of rehabilitation, work and return to work should be a standard topic to discuss both during and after completion of treatment.

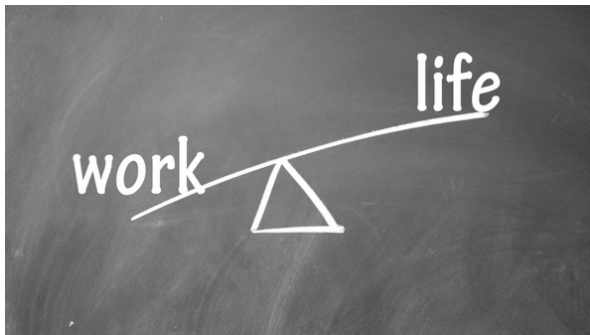


Future directions



Future directions

- Focus on work-related outcome measures.
- Develop vocational interventions (important stakeholders such as the employer should be included).
- Apply screening to identify the survivors who are in greatest (work-related) need.



Quote

“Many individuals who survived cancer are your colleagues, co-workers, or family members. They wish to continue to be long-term contributors to our work communities. Various stakeholders should be engaged in a serious international dialogue in order to achieve improved work-related outcomes for all involved. Let us not forget that this is a global matter.”

Prof. dr. Michael Feuerstein

Thank you!

Contact details dr. Saskia Duijts

VU University Medical Center | Department of Public and Occupational Health
Van der Boechorststraat 7 - C573 | 1007 MB Amsterdam | The Netherlands
T: +31 (0)20-4441783 | E: s.duijts@vumc.nl

The Netherlands Cancer Institute | Department of Psychosocial Research and Epidemiology
Plesmanlaan 121 | 1066 CX Amsterdam | The Netherlands
T: +31 (0)20-5126294 | E: s.duijts@nki.nl