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CANCER REHABILITATION – MUCH CAN BE DONE

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Cancer Rehabilitation

- Natural to think of Rehabilitation for major stroke, neuro trauma, fractures, after life-threatening infections, etc
- Why not also following cancer treatment?

Primitive fear & lack of experience of cancer

The cancer is gone, get on with life



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Cancer Rehabilitation

- Review of literature for rehabilitation after treatment of brain, spinal, bony and other tumours, with significant residual disability shows this to be well worth undertaking
- Condition – if underlying disease is stable and controlled (as in stroke or trauma)



Cancer Rehabilitation

- No randomised control studies
- Observational studies +/- comparison with “benign” disease show Level III evidence for efficacy of rehabilitation of disability in cancer survivors
- FIM™ or Barthel outcomes important

Cancer Rehabilitation

- Brain Tumours
 - Four non-comparative studies
 - Three studies compared with stroke/trauma
 - All seven showed improvement in FIM™ scores in brain tumour patients as a group
 - Underlying tumour pathology did not affect rehabilitation outcomes



Cancer Rehabilitation

- Brain Tumours
 - Improved mobility, personal activities in daily living and cognitive-communication function
 - High-grade glioma diagnosis patients improve at same rate as other brain tumour groups
 - Group/group controls, no individual matching
 - Neuropsychological evaluation of cognition is important, but interventions unproven so far

Cancer Rehabilitation

- Spinal Tumours
 - Three non-comparative studies
 - Two studies compared tumour/spinal trauma
 - All five showed improvement in FIM™ scores in the spinal tumour patients



Cancer Rehabilitation

- Spinal Tumours
 - Improved mobility function
 - Improved personal ADL function
 - Group/group controls, no individual matching



Cancer Rehabilitation

- Bony Tumours
 - Two non-comparative descriptive studies of rehabilitation for bony metastatic disease with pathological fracture
 - Both show improvement in physical mobility with rehabilitation, measured using the FIM™ scale in one study.



Cancer Rehabilitation

- Debility after acute cancer treatment
 - A single retrospective descriptive study, where “asthenia” was the primary diagnosis
 - Level III evidence for improved motor and cognitive components of FIM™ with rehab therapy programs



Cancer Rehabilitation

SW Sydney Experience 1

- Most m/cultural Australian urban population
- Blind individual matching of each tumour patient to individual “benign disease” patient
- FIM™, length of stay, discharge destinations
- 49 brain tu; 42 spinal tu; 17 pathol fractures; 66 general weakness & debility
- 14% returned to acute care; 81% went home



Cancer Rehabilitation

SW Sydney Experience 2

– Blind Matching Method:

- Individual cancer patient & “benign” patient
- Age decade, sex, ethnic group, Δ location
- Brain tu/stroke; IM spinal tu/MS; EM spinal tu/column disease; pathol/benign fractures; debility with equivalent benign condition;
- Brain/fracture site; ± 3 spinal levels matched



Cancer Rehabilitation

SW Sydney Experience 3

Length of Stay

<u>Lesion</u>	<u>Tumour</u>	<u>Control</u>
Brain	21.0 (17.1-24.9)	30.0 (22.2-37.9)
Spine	22.3 (16.5-28.1)	35.8 (25.1-46.6)



Cancer Rehabilitation

SW Sydney Experience 4

Length of Stay

<u>Lesion</u>	<u>Tumour</u>	<u>Control</u>
Bone #	22.4 (16.7-28.0)	29.7 (20.3-40.0)
Debility	19.1 (16.1-22.1)	21.3 (18.2-24.5)



Cancer Rehabilitation

SW Sydney Experience 5

FM™ Outcomes

<u>Lesion Site</u>	<u>Tumour</u>	<u>Control</u>
Brain	106 (102-110)	108 (104-112)
Spine	108 (101-114)	107 (99-110)



Cancer Rehabilitation

SW Sydney Experience 6

FM™ Outcomes

<u>Lesion Site</u>	<u>Tumour</u>	<u>Control</u>
Bone #	106 (96-120)	109 (104-116)
Debility	109.5 (102-113)	104.5 (97-109)



Cancer Rehabilitation

- From literature review and our SW Sydney experience, where tumour is controlled;
- Tumour patients with significant disability respond as well as “benign” diagnosis patients to IP rehabilitation programs – LOS, FIM™, discharge destinations
- These are the cost-drivers for care



Driving Function Restoration

- Back to driving: a major step in restorative care after brain tumour treatment
- Driving is a learned skill and privilege, regulated by law
- **Driving is not a universal human right**



Driving Function Restoration

- National Australian Guidelines
- Triangle of Responsibility:
 - Patient: acknowledge & report problems
 - Healthcare Worker: assess, recommend
 - Licensing Authority: rule-based decision



Driving Function Restoration

- Driving represents part of “normal life”
- Medical conditions for driving:
 - No epilepsy, no residual active tumour
 - Motor strength/coordination for controls
 - No visual field loss/double vision
 - Cognitive ability/judgment to react



Driving Function Restoration

- Assessment extent depends on problems:
 - Physical examination
 - Visual examination – fields & perception
 - Cognition/judgement review
 - Off-road testing – road rules, vehicle placement, stimulus presentation
 - On-road testing – Instructor + OT



Driving Function Restoration

- Possible outcomes:
 - Not fit to drive
 - Drive with limitations (distance, only in daylight, etc) **and** with regular follow-up about driving safety
 - Drive without limitations



Cancer Rehabilitation

Conclusions 1

- It is important to assess and rehabilitate any residual problems left after acute treatment of cancer
- Problems of function respond to the usual multidisciplinary rehabilitation treatment programs for survivors with stable disease



Cancer Rehabilitation

Conclusions 2

- Return to driving is very often possible for neuro tumour survivors – though not for all

No place for therapeutic nihilism!



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Rehabilitation & Restorative Strategies

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**Thank you
Any Questions?**

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