

# The role of Podiatrists in Cancer Care

## How to help your patients rehabilitate following surgery

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### Introduction

This article focuses on the podiatric issues faced during rehabilitation post surgery and the ongoing issues that cancer survivors face. These issues also impact their quality of life (QOL) and psychology.

This article will discuss:

- **Lymphoedema**
- **MSK and mobility**
- **Psychological support**

### Lymphoedema

The first post surgical adverse effect that patients suffer from is oedema or secondary lymphoedema. Secondary lymphoedema is a long term condition that causes swelling in the body's tissues that can develop after their lymphatic system has become damaged. Cancer patients can develop this condition after an adverse effect from:



- Radiation therapy causing scarring and inflammation of the lymph nodes and lymph vessels
- Surgical interventions where removal of or injury to the lymph nodes and vessels had occurred
- Cancer cells blocking the lymphatic vessels i.e. where the tumour infiltrates near a node
- Chemotherapies in the pelvic, groin or leg causing signs of extracellular fluid accumulation in the lower extremities

#### Changes include:

- Increased diameter of the leg and foot
- Increased weight gain
- Restricted ranges of motion
- Aching and discomfort

- Skin changes such as hardening and thickening of skin (fibrosis)
- Infections particularly in between toes and possible ulcerations
- Blistering and fluid leakage

It is also important to note that these changes may not occur until months or years after treatment.

Treatment and prevention of lower leg oedema is essential for preventing infections and loss of mobility. This is normally attained through compression garments and manual lymphatic drainage massage which can be performed by a lymphoedema therapist.

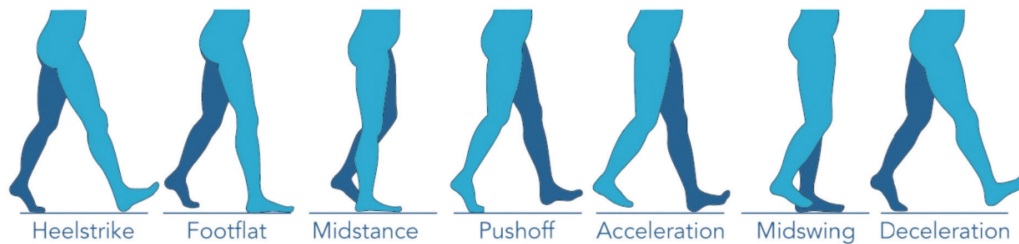
### The podiatrist's role in treating lymphoedema

The podiatrist's role should be to monitor the feet and legs for maceration and ulceration between the toes, onychocryptosis (ingrowing toenails) due to toes swelling and paronychia with complications along the digital sulci, fungal and bacterial infections. Routine podiatry may ideally maintain the skin and nails in optimal condition. Applying appropriate dressings between the toes before compression hosiery, can be applied to help reduce maceration and minimise pressure against ulcerations. The individual properties of dressings are important in regard to infection and tissue preservation. A podiatrist's knowledge of foot related ulcer dressings is paramount in these situations.

## MSK, mobility after surgery and disturbance of gait



It is important to appreciate that cancers do not affect feet directly but manifest from other forms of surgery such as hysterectomy, abdominal surgery, or skin grafts from the lower limb, where patients may lose their ability to tilt their pelvis or rotate their leg. Scar tissue traction may also affect the lower limb function at specific sites.



These locations can include changes to the hip, knee and foot position, resulting in pain, discomfort, and altering efficient gait patterns. The problems with mobility can happen many years after the treatment for the cancer, therefore requiring constant vigilance.

For example, a patient who has received a hysterectomy tends to experience an anterior tilted pelvic position throughout the whole gait cycle. This has a knock-on effect on the gait leading to strain on particular muscles and foot arches. In an optimum gait cycle a person should be able to engage in posterior tilt of the pelvis position during heel strike, mid stance, swing phase and propulsion to engage adequate supination.

This can involve muscles and connective tissue creating stress in specific structures:

- Plantar fascia
- Hamstrings
- Achilles tendons,
- Ilio tibial band
- Gastrocnemius
- Gluteals

Patients may complain of lower back pain as the sacroiliac joint stays compressed in an anterior tilted position, which leads to knee pain or heel pain and alternation to the shape of the forefoot. (e.g. creating a bunion). Providing exercises that strengthen the pelvis and encouraging posterior tilting will benefit the patient. Orthoses can play a part in reducing pronation helping to stabilise the body during walking. Manipulation of soft tissues e.g fascial release, could breakdown scar tissue and improve mobility.

In my experience as a pain management practitioner, I also use a range of other therapies including Anatomy in Motion (AiM) and systematic kinesiology to address secondary MSK complications in these patients.

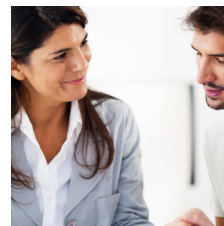
Research has shown that secondary lung cancer can cause foot drop, and require support with AFOs and similar modalities. Podiatrists and orthotists can work together to help reduce the disruption to the patient's gait and optimise the best recovery outcome.

Following surgery for breast cancer; lymph node removal or mastectomy, the patient may not be able to lift their arm. If they cannot swing their arm whilst walking, the hip has to work harder and the foot position may change, causing heel pain, hip pain and possible knee pain. The patient is likely to heel strike differently and arm swing alterations changes their mass distribution. The centre of gravity falls on the side where arm swing is most restricted.

Patients post rehab or with diabetes may be on long term steroidal therapies that can lead to weight gain and osteoporosis. This puts them at a higher risk of developing stress fractures, particularly in their 2nd and 3rd metatarsals, and may present as unexplained forefoot pain. Podiatrists

are able to detect suspected stress fractures at the time of occurrence using a tuning fork which they also use to detect any neurological changes. They are then able to immobilise the foot through padding, orthoses and pressure relieving devices if needed.

The podiatrist's role is vital in keeping feet healthy through routine checks and treatment of the skin, nails and monitor any associated MSK issues. This will significantly maintain mobility and add to quality of life.



### Psychological impact and support

The reduction in mobility can have a massive impact on the patient's psychology. Frustration may be exhibited due to no being able to do simple tasks such as moisturising,

as well not being able to get on with daily life due to pain when moving which could lead to isolation and depression. Patients may be unable to physically reach their feet and undertake daily tasks to maintain foot health such as monitoring, moisturising, filing hard skin and cutting toenails.

It has been noted that certain chemotherapy drugs can affect patient's long term cognitive mental health. The face to face consultation is invaluable for patients struggling with anxiety, depression and fatigue and our ongoing rapport with them can put us in the unique position to identify early warning signs of mental health issues. Becoming adept at spotting signs of depression after surgical management can assist patients who are experiencing a lack of independence and adverse mobility, helping to improve their quality of life. This is a skill not often emphasised by podiatrists who often have at least 20 minutes of quality patient contact. This is a necessary acquisition.

This enhances the quality of care delivery although may be seen by the patient as being outside of the cancer environment. However, during this period, the podiatrist is able to listen to the patient's worries, explain how certain medicines work, signpost patients to relevant support groups such as Maggie's centres, Macmillan Cancer Support, or the Samaritans as examples of different agencies. Healthcare advice covering smoking cessation, exercise and nutrition can also be provided.



## Conclusion

Research is often focused on adverse effects during treatment but cancer survivors often discuss the mental and physical anguish caused by podiatric adverse events such as onychomycosis, cosmetic changes, onychia, onycholysis and general weakening of the nails post cancer therapy on forums.

Patients battle to maintain skin integrity and hydration, particularly when undergoing long term hormone related treatments. Heel fissures and callosities increase and can lead to pain, ulceration, infections associated with weakened immune systems.

Podiatrists can provide an essential generalised practitioner role in providing treatment, prescribe antibiotics antifungals and give advice on how to improve the patient's foot health and prevent future problems. Intervention aims at improving quality of life through maintaining independence, minimising MSK adverse effects, improve the appearance of feet to help boost the patient's mood and confidence.

The podiatrist's contribution is currently not recognised sufficiently but provision of invaluable support in prevention of foot conditions, deteriorating and maintaining mobility are primary to any podiatric objective. Counselling, while a new concept, is within reach of most podiatrists willing to listen and acquire new skills associated with this group of patients and their family. This provides positive impact and the outlook towards supporting patients should remain central to our theme within delivering healthcare and improving quality of health.

## REFERENCES

Nudelman KNH, McDonald BC, Wang Y, et al. Altered cerebral blood flow one month after systemic chemotherapy for breast cancer. A prospective study using pulsed arterial spin labelling MRI perfusion. PLoS One 9: e96713, 2014.

Ahles Ta, Root JC, Ryan EI: Cancer and cancer treatment-associated cognitive change: An update on the state of the science. J Clin Oncol 30: 3675-3686, 2012

## About the author



### Afni Shah-Hamilton

Afni runs **Tiptoe Foot Care**, a private pain management and podiatry practice in Barnet, London. Afni graduated from University College London in Podiatry BSc (Hons) and completed her Master's degree at Kings College London. She currently sits on the

Macmillan AHP Advisory Board and has previously been a member of the National Patient Safety Campaign, Sign up to Safety, Advisory Group. Afni has worked for Southwark Foot Health Department in conjunction with Guy's and King's College Hospital as well as working for the Society of Chiropodists and Podiatrists (now the Royal College of Podiatry) as a Union Learn Fund Project Worker, promoting learning and development across the profession.

Afni has significant experience of dealing with high risk patients through her close relationships with oncologists and a local cancer charity. She is passionate about the role that podiatrists can play in improving the quality of life for both cancer sufferers and cancer survivors.



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