

Lymphoedema & Exercise at The Kaden Centre

Julia Britton / Senior Physiotherapist and Lymphoedema Therapist



KADEN CENTRE



Lymphoedema Exercise Specialists

Julia Britton Kaden's Senior
Physiotherapist is an experienced and
Australasian Lymphology Association
accredited Lymphoedema Therapist



Call us to find
our more or
book your
appointment
today.
4001 0113

INDIVIDUALISED ASSESSMENT AND TREATMENT

- Manual Lymphatic Drainage
Massage (MLD)
- Compression garments
- Compression bandaging
- Education and support to learn self-
management techniques.

TAILORED EXERCISE TO BUILD STRENGTH AND REDUCE SYMPTOMS

Our expert clinicians use research
based practice to help you
understand what is safe and
effective for you.

HICAPS terminal, Home-care packages,
work cover, GP management plans
accepted.



www.kadencentre.org.au



ACKNOWLEDGEMENT OF COUNTRY

The Kaden Centre acknowledges the traditional custodians of the lands we walk, reside and work on; the Awabakal & Worimi people.

We value their continued connection to culture, country, waterways and contributions made to the life of our region.

We pay our respects to Elders, past and present, and any First Nations People who are here today.

What is lymphoedema?

Who is at risk of developing it?

What increases the load on the lymphatic system?

What helps the lymphatic system function better?

What is the research base for exercise as a treatment for Lymphoedema?



What is the Kaden Centre?

- A purpose-built facility staffed by specialised Physiotherapists and Exercise physiologists.
- Not-for profit, registered charity.
- Our aim is to translate the latest Exercise research into practice.
- Offers specialised, individualised, Science based Exercise programs for people with cancer and chronic conditions.
- Current recipients of a Business sustainability grant through the PHN.

Our Mission



- To translate exercise research into practice
- To provide a supportive space for people to recover mentally and physically from Cancer treatments.
- To educate people on the benefits of exercise and assist them to gain the skills and confidence to enable them to exercise regularly.

IMPROVING YOUR JOURNEY WITH THE KADEN CENTRE

DIAGNOSIS 1

We understand diagnosis is never easy for anyone. The Kaden Centre is committed to supporting you through your cancer journey.



3

TREATMENT

Exercise during your treatment phase can have multiple benefits. Our clinicians tailor exercise around your capabilities and schedule.



2



PRE-SURGERY

Exercise to help you:

- Increase fitness and function before surgery
- Recover better and quicker
- Increase your independence to care for yourself
- Reduce post surgery complications and decrease the length of your hospital stay

4



HEALING & OPTIMISING FUNCTION

Our clinicians work with you to continually update and optimise your program as you recover. Ongoing exercise supports your function at any stage.

- Our goal is to embed Exercise as a standard treatment for all people with cancer and chronic conditions.
- Our clinicians work in an MDT with GP's, Specialists to ensure safe, appropriate exercise programs delivered.
- Assist clients to monitor changes in their health/chronic condition.

2 / 4 Ironbark Close, Warabrook NSW 2304

(02) 4001 0113


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ABN 30 620 926 668




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Our services

- **Exercise Oncology** services including individualised assessment and exercise programming.
- **Physiotherapy Musculoskeletal Assessments and Treatment.**
- **Clinical Pilates classes** – Specialised Clinical Pilates Exercise Physiologist. Individual assessments, group classes available.
- **HIIT training and Prehabilitation** prior to Surgery.
- Online portal for **Home exercise programs**
- **Lymphoedema** services including education and screening, MLD massage, bandaging, compression garment prescription.

MOVING THROUGH CANCER:

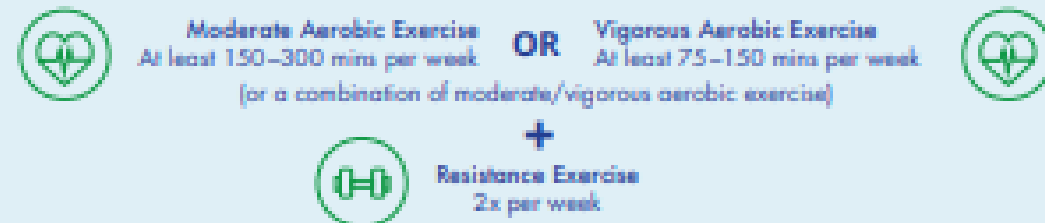
Exercise for people living with and beyond cancer

TO GET STARTED

Avoid inactivity; moving more and sitting less benefits nearly everyone

FOR OVERALL HEALTH

Aim to meet the current exercise guidelines for adults¹

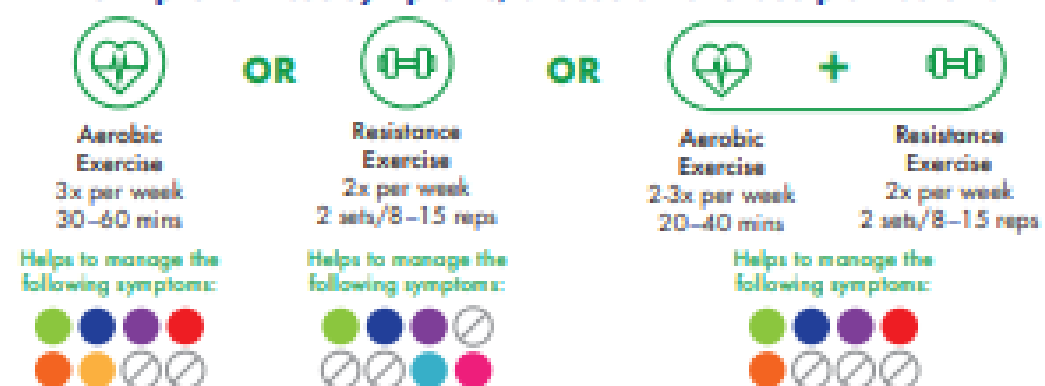


FOR PEOPLE DURING & FOLLOWING CANCER TREATMENT

Research shows lower amounts of exercise can still help with the following cancer treatment-related symptoms:



To improve these symptoms, choose an exercise plan below:



¹ Physical Activity Guidelines for Americans, 2018

² Progressive supervised resistance training does not exacerbate lymphedema

³ At least 12-months of resistance training plus high impact training needed

- American College of Sports Medicine infographic on exercise in cancer

Exercising With Cancer

Exercising can help you prevent muscle loss, decrease fatigue and increase functionality during cancer treatment. It is safe and free!



1. Consult with your oncologist

Consult with your oncologist and surgeon.



2. Start slowly.

Increase your exercise duration over time. Take as frequent breaks as you need.



3. Aerobic exercise

Frequency: at least 3-5 days/week
Intensity: Moderate (not so hard that you can't carry on a conversation)
Time: 20-60 minutes. (Better to split that in short bouts during cancer treatment.)
Type: rhythmic, weight bearing exercises, using large muscles.



4. Resistance training

Frequency: 2-3 days/week
Intensity: Moderate
start out with weights you can lift 10-15 times but begin with 3-5 repetitions, then build up to 15 reps.)
Time: 1-3 sets
Type: start with machine weights, progress to free weights as you improve strength and balance



5. Flexibility and balance training

Flexibility and balance training is also very beneficial for you! Consider doing yoga, tai chi or pilates.



6. Stretching

Stretch large muscle groups and tendons after each training session. Each stretch should last 10 to 30 seconds and be repeated 3 to 4 times.



7. Be safe

Do not exercise with fever, risk of bleeding, anemia, abnormal blood counts, extreme fatigue or extreme pain.



8. Key message

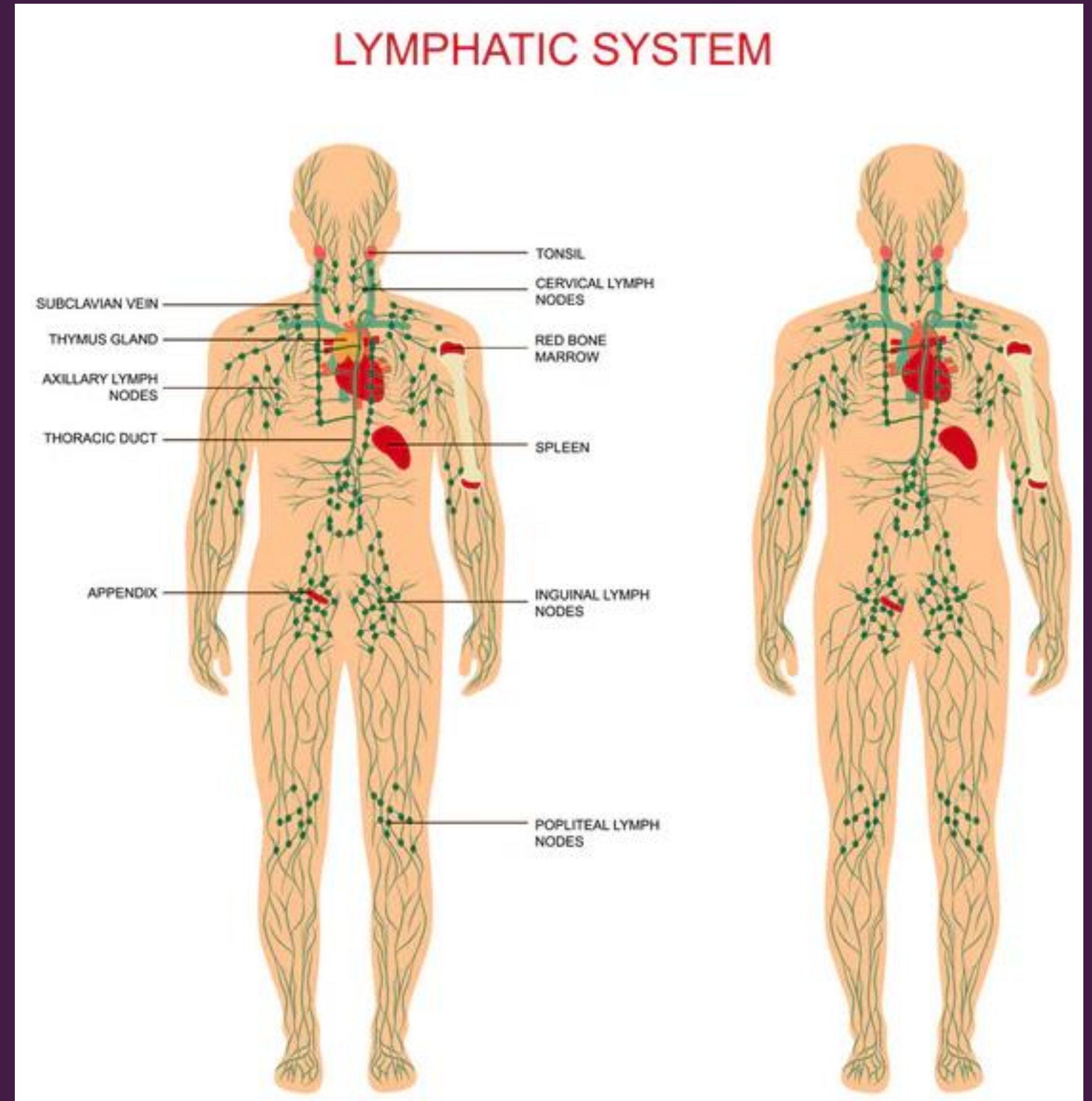
-Listen to your body!
-Avoid inactivity!



- Reduce the risk and severity of side effects of cancer treatments
- Reduce complications of surgery and time spent in hospital
- Help with recovery from treatment by increasing energy levels, reducing treatment related muscle loss, strengthening bones and improving mobility and balance
- Improve sleep and fatigue and relieve stress, anxiety and depression
- Help maintain a healthy weight
- Reduce the risk of developing, or improve health issues such as high BP, heart disease, stroke, osteoporosis and type 2 diabetes
- Reduce the risk of some cancers coming back including breast, prostate, bowel endometrial cancers
- Boost mood and self esteem
- Offer new ways to meet people and socialize

The Lymphatic system

- Intricate open network of lymph nodes, ducts and vessels
- Primary function to drain excess interstitial fluid and waste products
- Immune role
- Smooth muscle and valves propel lymph
- Nodal basins axilla, groin



The Lymphatic system

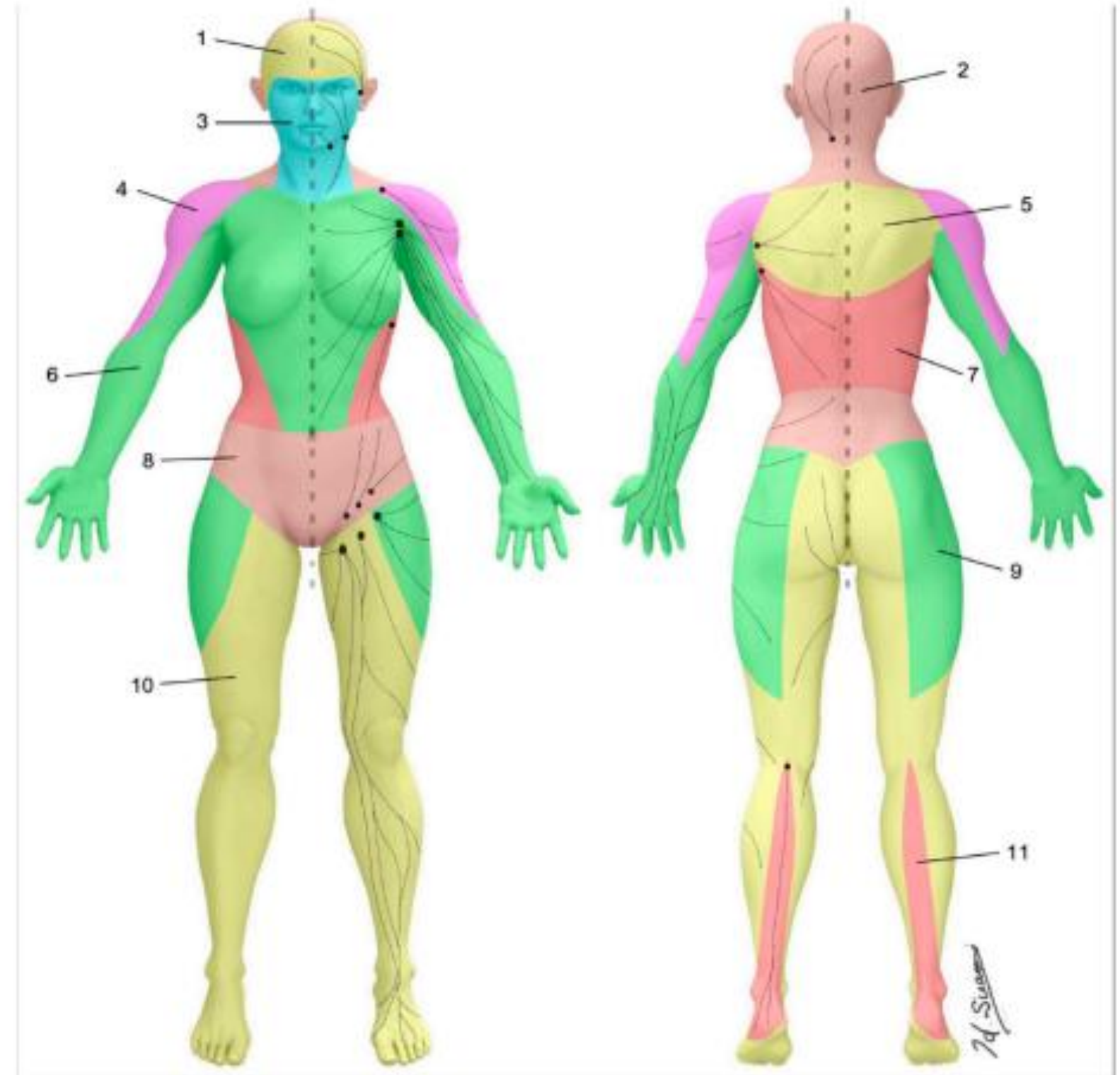
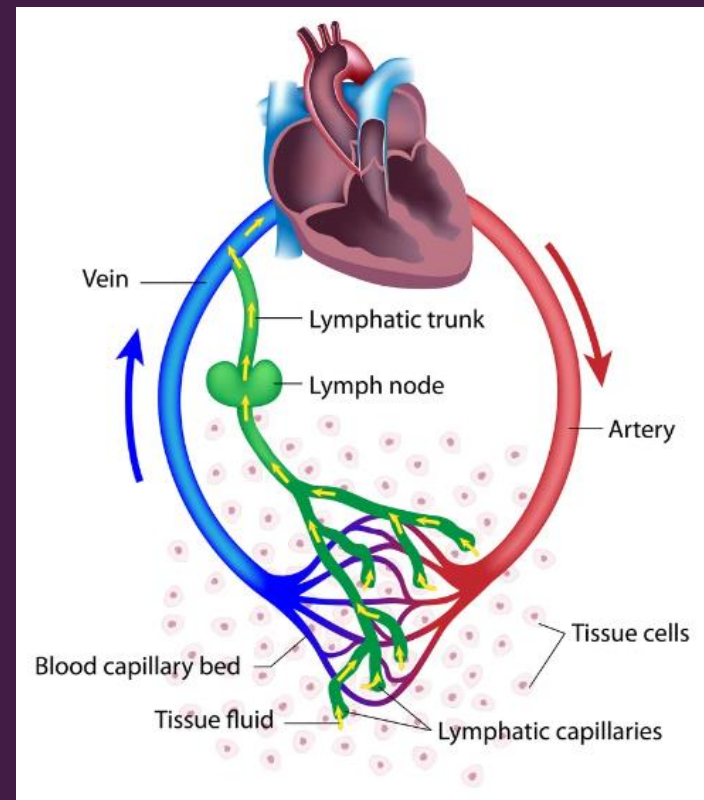


Figure 3. Lymphosomes of the body. The lymphatic territories are demarcated according to their corresponding lymphatic basins: (1) temporal, (2) occipital, (3) submental, (4) subclavicular, (5) subscapular, (6) lateral axillary, (7) pectoral, (8) superior inguinal, (9) lateral inguinal, (10) inferior inguinal, (11) popliteal. (Reproduced with permission of Hiroo Suami).

Images from "Anatomical Theories of the Pathophysiology of Cancer-Related Lymphoedema" Hiroo Suami Australian Lymphoedema Education, Research and Treatment Program, Faculty of Medicine, Health and Human Sciences, Macquarie University, Sydney, NSW 2109, Australia; hiroo.suami@mq.edu.au; Published: 23 May 2020, Cancers.

The Lymphatic system

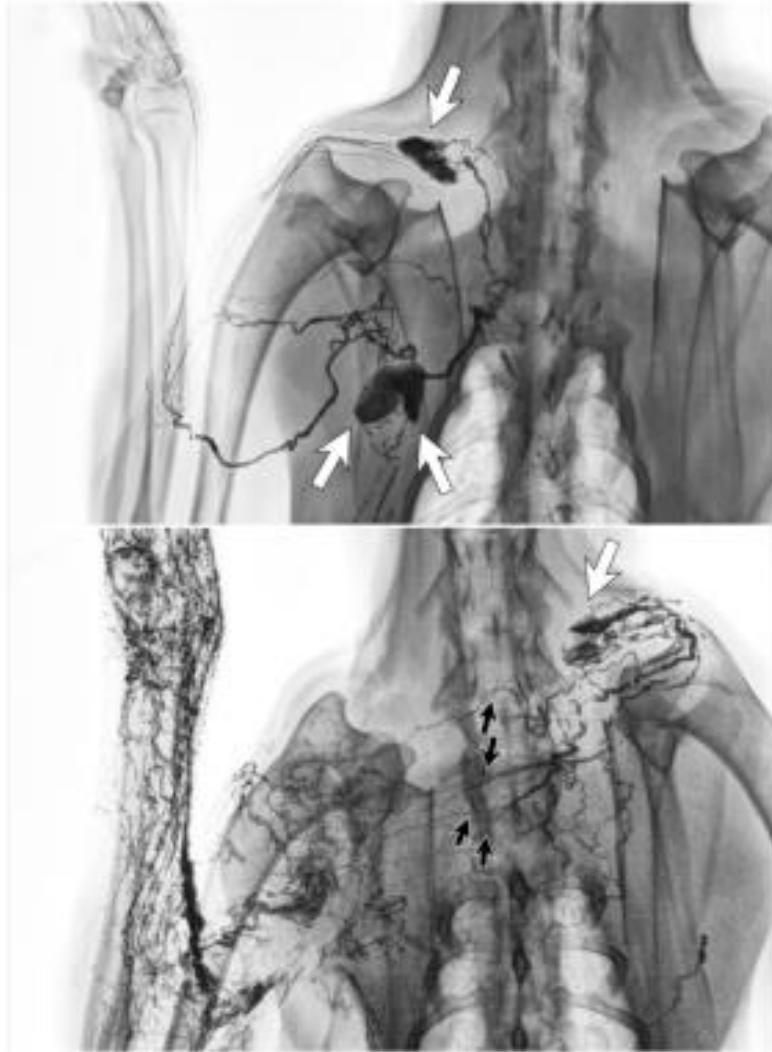


Figure 6. Lymphangiography images of a canine before lymph node dissection surgery (**top**) and six months afterwards (**bottom**). The lymphatic vessels from the left forelimb crossed the front midline and connected to the right cervical lymph node (white arrow) via regenerated lymphatic vessels (black arrows). (Reproduced from [36] with permission.)

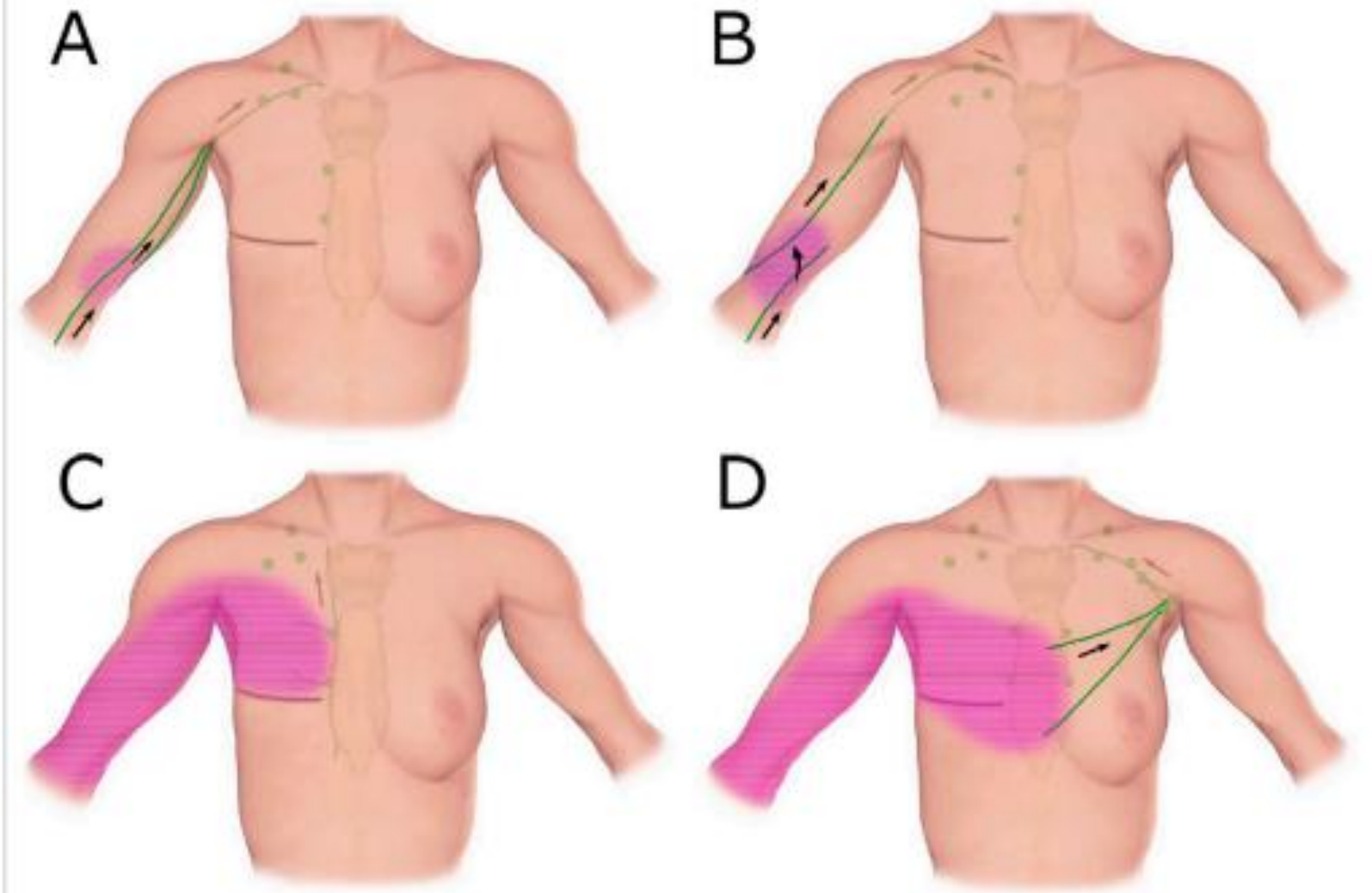
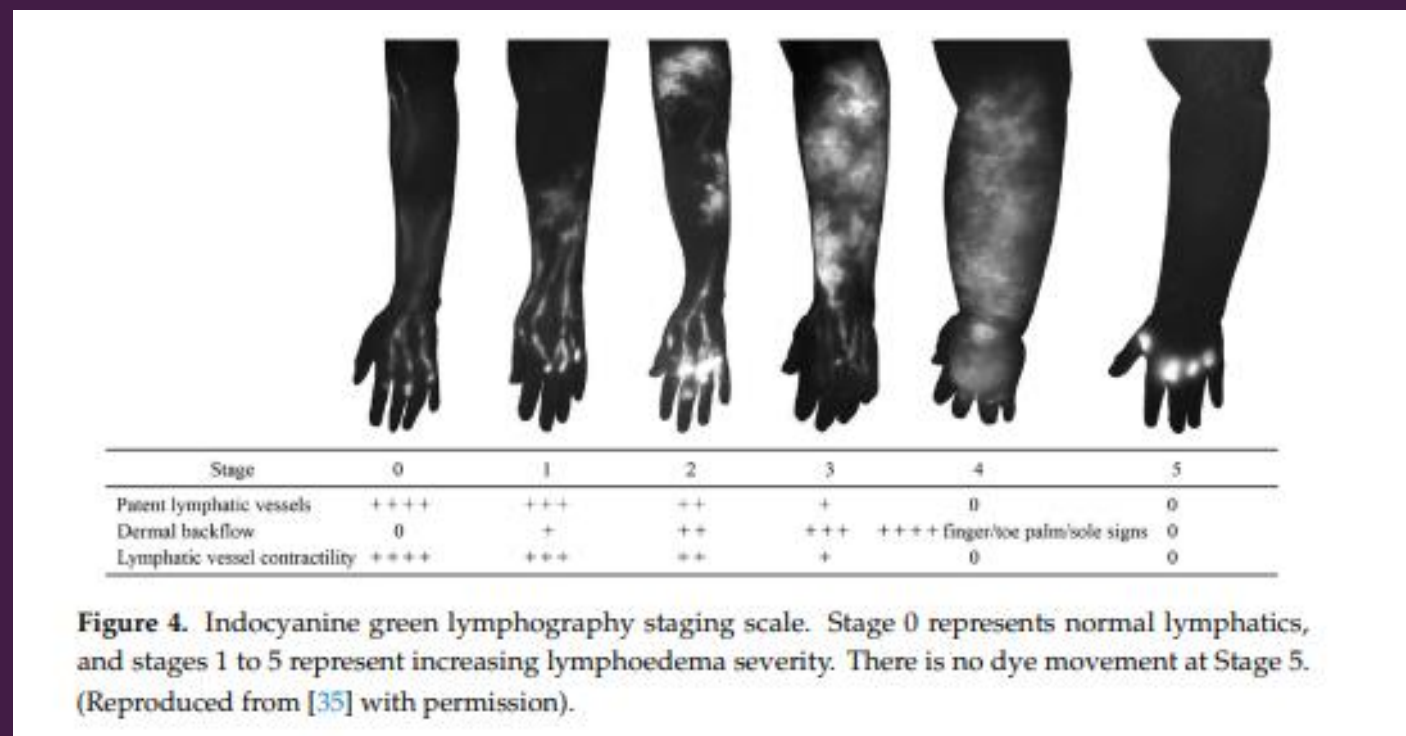


Figure 7. Schematic diagrams show patterns of lymphatic drainage in upper extremity lymphoedema. (A) The ipsilateral axillary region, (B) the clavicular region, (C) the parasternal region, (D) The contralateral axillary region. (Reproduced from [42] with permission.)

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What is Lymphoedema

- Accumulation of protein rich fluid in the tissues
- Can occur as primary: congenital malformation of the lymphatic system
- Secondary, or Iatrogenic Lymphoedema occurs after damage to or removal of Lymph vessels and Lymph Nodes.
- Slow, build up over time. If swelling occurring rapidly, over hours, rule out DVT/infection.



Who is at more risk for developing Lymphoedema?

- DiSipio *et al.* (2013), in their systematic review and meta-analysis, estimated that the probability of developing arm lymphoedema is 21.4% (95% CI: 14.9–29.8%) after Breast cancer
- Those who have more extensive Lymph Node surgery
- Those with a higher BMI
- Radiation Treatment: Post Mastectomy with Lymph node dissection, RT increases risk of LO by nearly 5 times.
- There is more risk of developing Lymphoedema with increasing total dose of RT, overlapping RT fields, and posterior Axillary boost RT
- Strongest risk of Lymphoedema at 18 m was swelling in the first 12 months when ≥ 5 nodes removed.
- Lymphoedema in the first 12 months is associated with **taxane based chemotherapy** and **overweight** when ≥ 5 nodes removed.
- Factors for which women are typically cautioned were not identified as a risk for Lymphoedema (Kilbreath et al 2016)

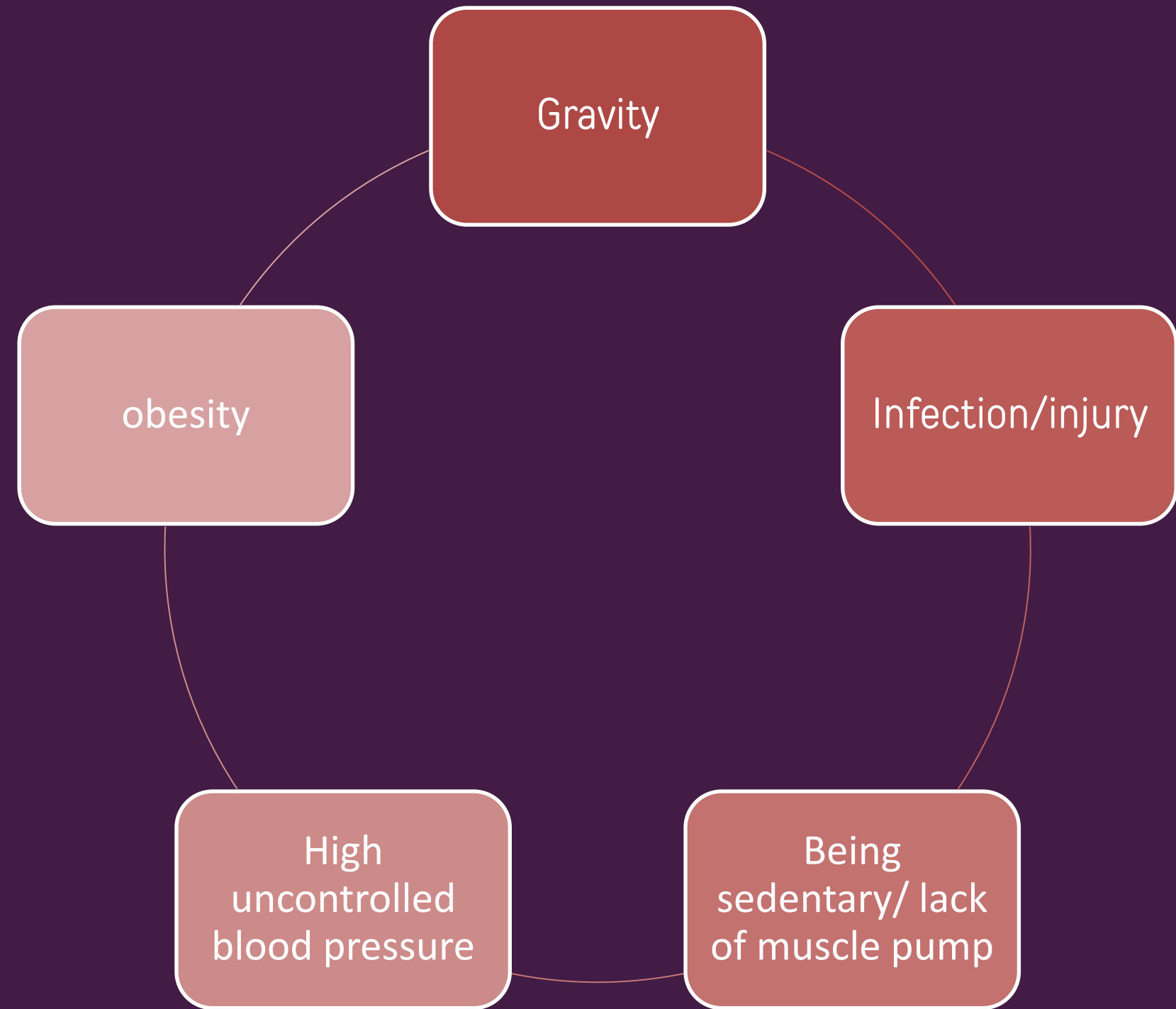
Radiation Treatment and Lymphoedema

The risk of developing lymphoedema post RT is worse due to;

- Development of fibrosis post RT
- Lymphatic proliferation inhibited by RT, prevents compensatory lymphatic vessel growth
- Lymph nodes highly sensitive to RT, fatty change first, then fibrosis
- Increases pressures proximally if Node unable to process fluid.

Leads to mechanical insufficiency of vessels, and decreased proliferative capability

What makes the lymphatic system work harder?

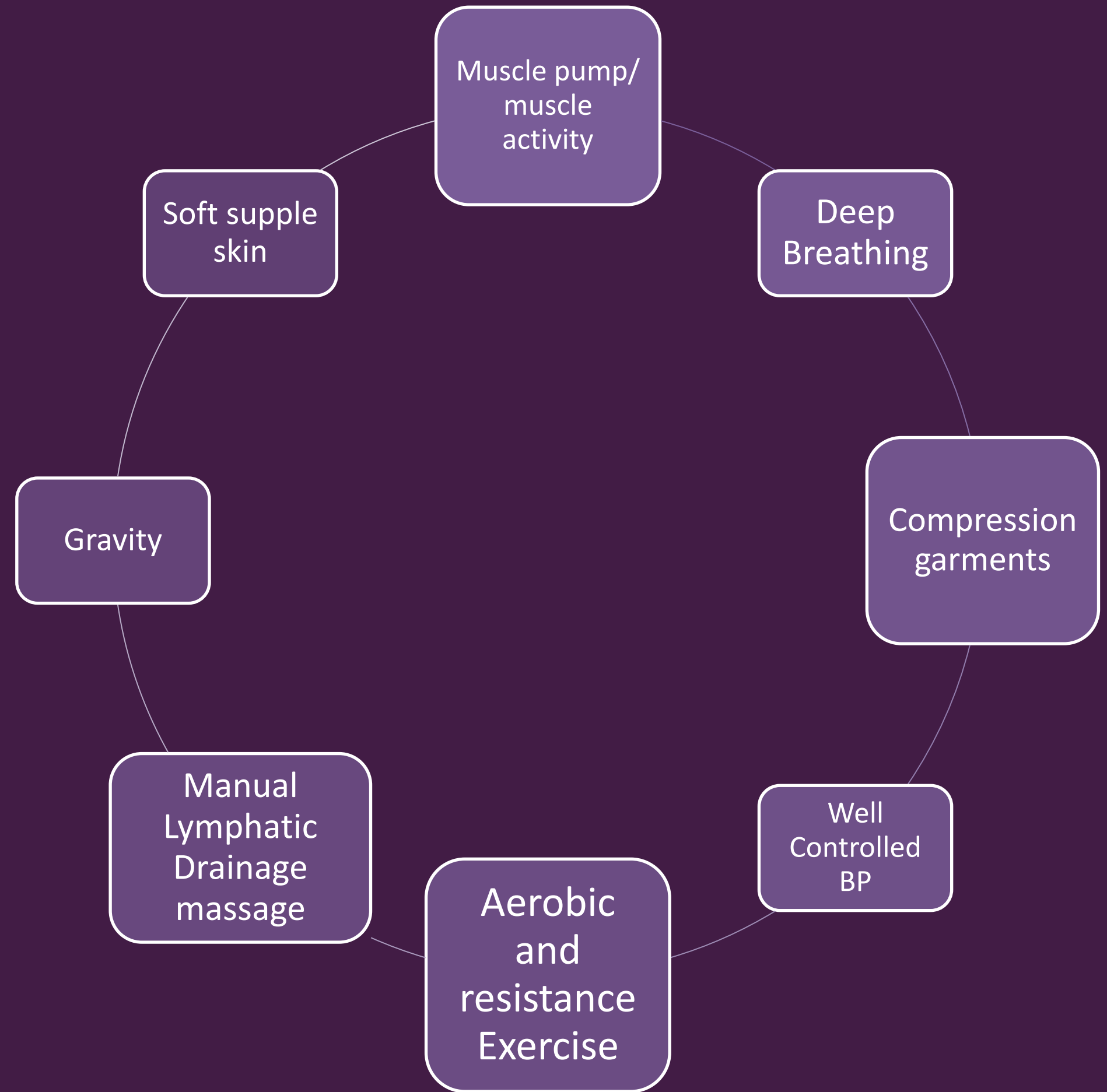


Guide for people on what to “avoid”

- Monitor the “at risk” territory (upper quadrant)
- Seek review if any signs of infection/ injury
- [https://www.lymphoedema.org.au/public/7/files/Position%20Statements/ALA%20Consensus%20Guideline%20Cellulitis-Rebrand%202019\(1\).pdf](https://www.lymphoedema.org.au/public/7/files/Position%20Statements/ALA%20Consensus%20Guideline%20Cellulitis-Rebrand%202019(1).pdf)
- Monitor your BP and see your GP to assist.
- Maintain a healthy weight
- Maintain an active lifestyle.
- Keep living as normally as possible. Consider modifying things you know may put you at risk. Figure out strategies that allow you to do the things you love!

Wear gloves/long sleeves to garden. Be sun safe. Offer your limb that is not at risk for BP monitoring and blood draws/ vaccinations. Avoid long periods of being sedentary.

What helps the lymphatic system function better?



Moisturise skin

The skin is the best barrier to infection we have.

By keeping skin soft, supple and well moisturised you can decrease your risk of infections.



Deep Breathing

Deep Breathing helps the lymphatic system function better.

Taking a SLOW, DEEP breath changes the pressures inside the thoracic cavity.

This has a “drawing” effect on filtered fluid from the Lymph nodes, bringing fluid toward the large collecting ducts in the chest.

Combine deep breaths with slow exercises and arm movements to get more “bang for buck”



Compression Garments

Support your lymphatic and venous return


Help counter the effect of gravity, creating dependent oedema.

Act as a “barrier” discouraging fluid from expanding into the tissues.

Do their best work when you are active, assisting the muscle pump to function.



Lymphoedema Rx

- Needs to be assessed and treated by accredited Clinicians (Physiotherapist, Occupational therapist or Registered Nurse)
- At the Kaden centre we have a strong Focus on Education and Exercise
- This is a chronic, condition, and needs good self management on a daily basis.
- Individualised assessment to implement individual program is best. Therapists take into account scars, previous surgery/ injury, MSK limitations.
- Includes a combination of daily monitoring, self massage/exercise ,compression and deep breathing



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Research base for Exercise in Lymphoedema



- For many years, it was considered best practice for this population to avoid exercise; however, in recent years, research has begun to challenge this belief.
- Lymphatic pumping doubled with moderate intensity exercise. This response to exercise is comparable to data collected in healthy controls. Thus the excision of axillary lymph nodes does not appear to affect subcutaneous movement of lymph from the hand.
- Exercise has been shown to be safe when individually prescribed and supervised.
- Staying physically active has other benefits for breast cancer patients including maintaining a healthy weight, improving cardiovascular fitness there by decreasing the risk of other health issues.
- Exercise improves levels of anxiety
- Those who are more physically active tended to have less complications eg infection/ cellulitis

Research base for Exercise in Lymphoedema

- Participating in resistance- or aerobic-based exercise did not change lymphedema status, **BUT** led to clinically relevant improvements in function and quality of life, with findings suggesting that neither mode [Aerobic vs resistance training] is superior with respect to lymphoedema impact.
- As such, personal preferences, survivorship concerns and functional needs are important and relevant considerations when prescribing exercise mode to those with secondary lymphedema.
Buchan et al 2016



Resistance training and Lymphoedema



- Cormie et al 2013 showed that women with BCRL can undertake heavy resistance training programs (6 to 10 reps of 75 to 85% RM) without fear of lymphedema exacerbation or increased symptom severity.
- Women with breast cancer-related lymphedema can be informed that appropriately prescribed and supervised upper body resistance exercise is safe and can aid in the management of lymphedema through improvements in physical function and quality of life.
- An acute bout of moderate-load, upper-body resistance exercise performed in the absence of compression does not exacerbate lymphedema in women with BCRL. B Singh et al 2015

Who would benefit from attending the Kaden Centre?

- **People living with a diagnosis of Cancer.**
 - Research based exercise tailored to individual needs
 - Exercise has been shown to improve QoL, decrease symptom burden, aid recovery, balance risks of bone loss from hormone treatments.
- **People living with chronic health conditions** including arthritis, cardiovascular, respiratory, neurological and metabolic conditions.
- **People with acute or chronic Musculo-skeletal conditions** (with or without Cancer and chronic conditions)

We accept:

- TCA/EPC GP management plans
- Private Health funds, Hicaps terminal
- NDIS
- Work cover
- People with Home/Aged care packages
- Additional to this The Kaden Centre fundraises to be able to financially assist people to attend.



LYMPHOEDEMA WORKSHOP

10:30am for 11 am start,
Tuesday 6th August 2024



Learn How to:

- ✓ Understand the lymphatic system, and why Lymphoedema occurs after cancer treatments.
- ✓ Hear about ways you can recognise signs of early Lymphoedema
- ✓ Explore evidence based self-management strategies to manage Lymphoedema after cancer treatment



No cost to attend, but numbers are limited!

Call to register your
interest to attend

Location:

The Kaden Centre
2/4 Ironbark Close
Warabrook NSW 2304

For More Info:

info@kadencentre.org.au
www.kadencentre.org.au

Lymphoedema Education at the Kaden Centre

- First session planned for Tuesday 6th August
- Ideal for anyone interested in learning how exercise can prevent and/or help manage Breast Cancer related Secondary Lymphoedema.

How to refer?

People can self-refer

GP referral for TCA
provides Medicare
subsidy for costs

Medical Objects

Online referral form on
website:
www.kadencecentre.org.au

Phone (02) 4001 0113
Fax (02) 4006 3032

IMPROVING YOUR JOURNEY WITH THE KADEN CENTRE

DIAGNOSIS 1

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CENTRE

Thank you.

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(<https://www.sciencedirect.com/science/article/pii/S0960977616300418>)

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