

South West Wales Cancer Centre Strategic Programme Case 2023/2024 – 2032/2033

**Improving regional non-surgical oncology services
(Radiotherapy and Oncology Outpatients) for the population
of South West Wales**



Introduction

On behalf of Hywel Dda (HDdUHB) and Swansea Bay (SBUHB) University Health Boards, we are delighted to present our Strategic Programme Case (SPC) for the South West Wales Cancer Centre (SWWCC) for the period 2023/2024 – 2032/2033 to support regional non-surgical oncology services (cancer treatment) in South West Wales. It will provide a framework to develop further business cases and service plans to ensure that all patients across the region receive the services they deserve. This SPC refers specifically to radiotherapy and oncology outpatients as cancer treatment services which require development of regional service models, and joint business cases for investment as required in the next 10 years. Other cancer treatment services, e.g. Systemic Anti-Cancer Treatment (SACT) and Acute Oncology Services are referenced for completeness but are out of scope as they are local Health Board developments to be made over the next 10 years. Haematology and surgical cancer treatments are out of scope and are not included in the SPC. The SPC covers adults only – paediatrics, children and young people have a different cancer treatment pathway across Wales.

It is known that the incidence of cancer is rising which is increasing the demand on cancer services – estimated to rise by at least 2% a year for the next 15 years. The SWWCC based in Singleton Hospital, Swansea provides non-surgical oncology services for the population of South West Wales.

The South West Wales Cancer Centre Regional Strategic Programme was established in 2021/2022 to support the development and delivery of regional cancer services across the two Health Boards, building on the strategic vision set out by the ARCH Non-Surgical Oncology Strategy (2018) and the respective Health Board Clinical Services Plans. This aligns with and supports delivery of national cancer strategies, including the Cancer Quality Statement (2021) and the Cancer Action Plan for Wales (2022).

By developing this SPC we aim to meet its objectives to ensure SBUHB and HDdUHB:

- Improve the health outcomes for people diagnosed with cancer;
- Reduce the waiting times for treatment – increasing capacity to meet the growing demand for services;
- Provide equitable access to patients across the region; and
- Provide a high-quality regional cancer service equipped with access to modern diagnostic/therapeutic equipment in accordance with best practice.

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1. Strategic Context

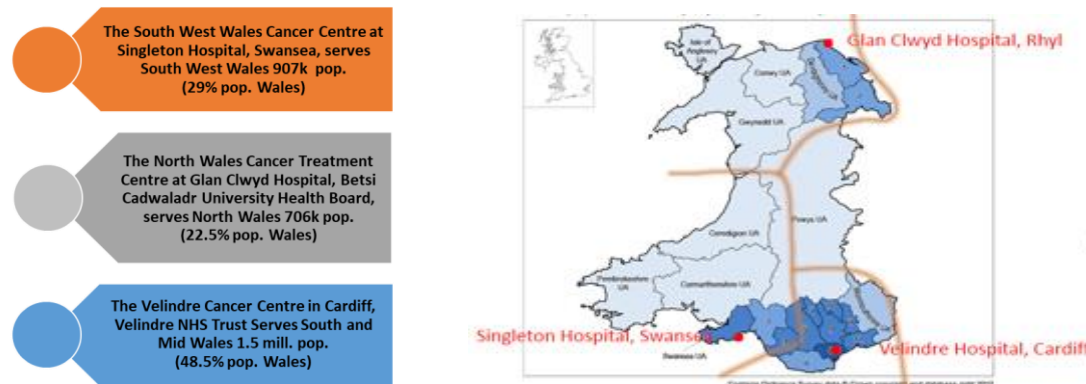
1.1 Introduction

The South West Wales Cancer Centre (SWWCC) based at Singleton Hospital, Swansea provides adult-only non-surgical oncology services (cancer treatment) predominantly for the population of Swansea Bay University Health Board (SBUHB) and Hywel Dda University Health Board (HDdUHB).

1.2 Background

The incidence of cancer continues to rise on average by 1.5% a year, and demand is projected to rise by at least 2% a year for the next 15 years. 1 in 2 people are expected to be diagnosed with cancer over their lifetime, with half of patients surviving their disease for more than 10 years. Cancer treatments are now more complex, more personalised, and more available resulting in an increased number of people being cured and more people living with cancer as a chronic disease. The Covid pandemic has had a significant, ongoing and evolving impact on cancer pathways from diagnosis to treatment and rehabilitation. The cancer centre expects to continue to respond to these challenges proactively.

In Wales, the following three regional cancer centres provide radiotherapy, chemotherapy, immunotherapy, and more specialist treatment:



The SWWCC serves nearly one-third of the population of Wales. Due to the historic flow of patients in Bridgend area, some tumour sites for the Bridgend population (including Gynaecology and Upper Gastrointestinal (UGI) patient pathways) continue to flow into the SWWCC for treatment, rather than into the Velindre Cancer Centre (post 1st April 2019 most services for Bridgend residents are provided and commissioned by Cwm Taf Morgannwg University Health Board). In addition, the SWWCC serves a small catchment area on the South West Powys border, due to its geographical location.

1.3 Organisational Overview

SBUHB covers a population of 390,000 within Swansea and Neath Port Talbot Local Authorities. SBUHB has a budget of approx. £1 billion and employs 12,500 staff. SBUHB currently operates three acute hospitals, Neath Port Talbot, Singleton and Morriston Hospital, and the Acute Mental Health Inpatient Unit at Cefn Coed Hospital, Swansea. The Health Board provides the regional non-surgical specialist services for cancer services, and provides tertiary services such as Burns and Plastic Surgery services for Wales and the South West of England.

HDdUHB provides health services for 390,000 people in Mid and West Wales covering Carmarthenshire, Ceredigion, Pembrokeshire, and bordering counties. It has four major hospitals (along with five Community hospitals and two integrated care centres) and a budget of over £947 million. Hywel Dda employs approx. 10,000 staff. It covers the second most sparsely populated health board area in Wales.

1.4 Developing the Strategic Programme Case for Regional Non-Surgical Oncology Services in South West Wales

Across Wales, cancer services are delivered through well-defined pathway of care that involves the following five key components:

1. Cancer Prevention: Enhancing public awareness and education to make informed decisions about lifestyle choices that promote a healthy, cancer free population.
2. Cancer Diagnosis: Cancer can be identified through a National Screening Programme or where cancer symptoms are identified by the patient/health care professional. If cancer is suspected the patient is assessed by a multi-disciplinary team and cancer may be diagnosed.
3. Treatment: The treatment options for every patient are discussed and considered by multi-disciplinary teams (MDTs). The treatment options include surgery, non-surgical treatment e.g., Radiotherapy or Systemic Anti-Cancer Therapy (SACT), a combination of these treatments and/or supportive care. Care often straddles organisational boundaries.
4. Recovery/Follow Up: Regular follow up appointments are important to monitor recovery, manage and reduce the aftereffects of treatment and to ensure any signs of cancer relapse/recurrence are identified at their earliest stage.
5. End of Life Care: Sadly, not all patients survive cancer – openness about the need to plan end of life care is essential. A focus on living and dying well, early identification of needs and access to fast, effective palliation are important to reduce distress for both the patient and their family.

The scope of the SPC involves elements in the **Treatment** stage (specifically, radiotherapy as a non-surgical oncology treatment) and **Recovery/Follow up** stage (specifically, oncology outpatients for new and follow up appointments for patients diagnosed with cancer). Welsh Government requires Health Boards, Trusts, Special Health Authorities, and hosted bodies to plan, deliver, recover, and improve cancer services spanning the whole cancer pathway. These need to be aligned with the quality attributes, service specifications and National Optimal Pathways (NOPs) described in the Quality Statement for Cancer. As such, SBUHB and HDdUHB incorporate plans to address these elements into Health Board 3 Year Integrated Medium-Term Plans (IMTPs) for agreement with Welsh Government (WG) and are accountable to WG for delivering these. The SPC describes the shared priorities for non-surgical oncology as a region, which will be articulated in both Health Board IMTPs.

1.4.2 Approach to SPC Development

Development of a Programme Business Case was initiated in 2019/2020 and the original scope involved all oncology services (SACT, Radiotherapy, Outpatients, Acute Oncology Services) provided by the South West Wales Cancer Centre (SWWCC).

The SWWCC Regional Strategic Programme was established in 2021/2022 to support the development and delivery of regional cancer services in South West Wales, building on the strategic vision set out by the ARCH Non-Surgical Oncology Strategy (2018) and the respective Health Board Clinical Services Plans and Regional Clinical Services Plan. This aligns with and supports delivery of national cancer strategies, including the Cancer Quality Statement (2021) and the Cancer Action Plan for Wales (2022).

Following work undertaken in 2021/2022, it was agreed to amend the scope of the Programme Business Case (PBC) to focus on regionally delivered service elements - Radiotherapy and Oncology Outpatients – and extend to a 10-year period. Systemic Anti-Cancer Therapy (SACT) and Inpatient Acute Oncology Service elements were agreed for local development and out of scope of the SPC, however these would be shared in the spirit of good practice and alignment of strategic direction. It was then agreed to develop a Strategic Programme Case (SPC), rather than a Programme Business Case (PBC). Since initial PBC conception, there has been notable change to the landscape due to COVID and a change in strategic direction from the original ARCH Non-Surgical Oncology Strategy, i.e., there is no ambition to move the SWWCC from Singleton Hospital to Morriston Hospital in next 10-year period; this position was confirmed by SBUHB in the Changing for the Future public engagement exercise in 2020.

Bronglais Hospital is in scope of this SPC as part of setting the strategic direction for regional oncology services for the HDdUHB population, however the scope and detail will be considered on a case-by-case basis in subsequent business cases to meet the needs of the patients that flow into Bronglais for services. In addition, there is a need to ensure continued alignment with the strategic direction and work of the Mid Wales Collaborative.

1.5 Aims and Objectives

The SPC overall purpose is to set out SBUHB and HDdUHB's regional commitment to developing (and securing investment as required) to ensure regional cancer services are on par with other centres in Wales and the UK, ensuring patients in the south west region of Wales have equitable access to, and outcomes from, non-surgical oncology services. At the heart of all of this are the patients across the region that we serve. A core theme of the SPC is to make sure regional cancer pathways work as well as possible. Pathways provide assurance that people are getting the right standard of care, wherever they are being treated and that targets are being met and enhance patient experience and outcomes. In addition, the ambitions in the SPC aim to ultimately deliver patient-focused regional service models that provide sufficient capacity to deal with growing and changing demand for services, whilst improving clinical outcomes and patient experience for the population of South West Wales.

The **objectives** of the SPC are:

To provide a fit for purpose SWWCC and regional cancer services for the South West Wales population	To improve the quality of outcomes of care from the SWWCC and regional cancer services	To improve the capacity of regional cancer services to meet demand and improve access and outcomes
To support the SWWCC to improve the economy of local and regional cancer services	To improve the efficiency of the SWWCC and regional cancer services	To improve the effectiveness of the SWWCC and regional cancer services

By meeting the objectives, we will aim to:

- **Improve the health outcomes for people diagnosed with cancer;**
- **Reduce the waiting times for treatment – increasing capacity to meet the growing demand for services**
- **Provide equitable access to patients across the region**
- **Provide a high-quality cancer service equipped with access to modern diagnostic/therapeutic equipment in accordance with best practice;**

This will be enabled by:

- **The development of more sustainable workforce;**
- **Providing access to replacement and modern specialist infrastructure and equipment;**
- **Improvements in our digital infrastructure and innovation.**
- **Ensuring that the service is supported by access to the best research; and is supported by the principles of Value Based Healthcare.**

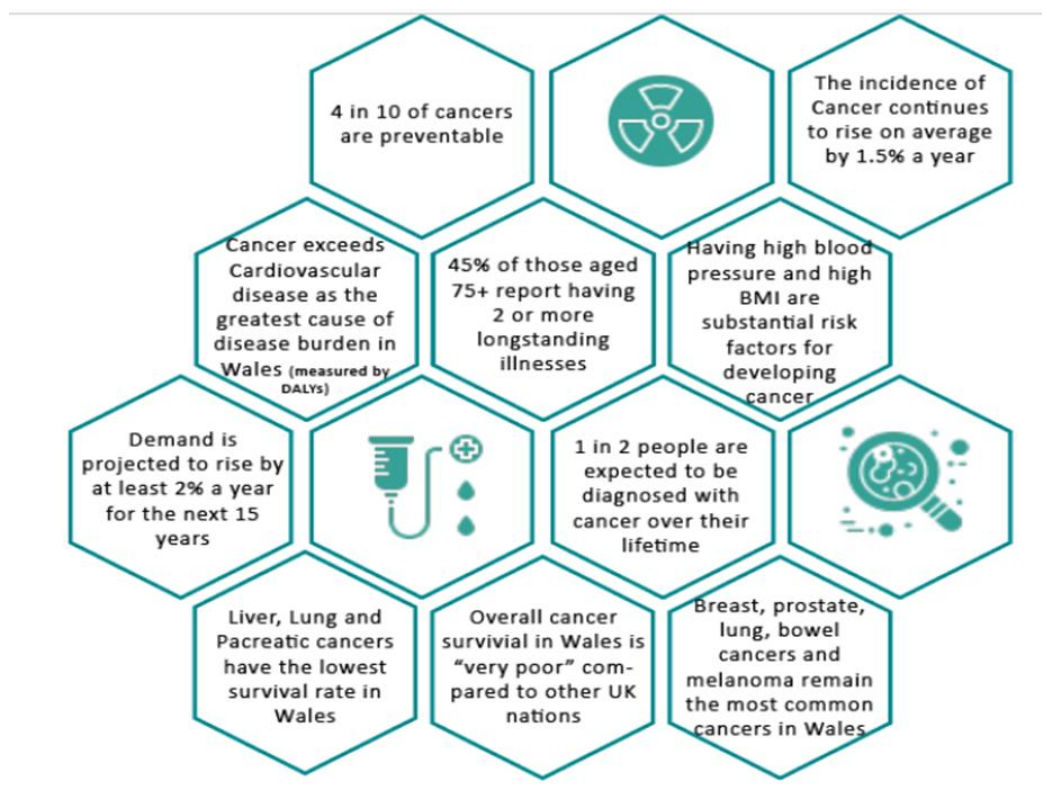
In doing so, this will allow us to deliver the two Health Boards’ Regional Clinical Services Plan (RCSP) and their South West Wales Non-Surgical Oncology Strategy (ARCH 2018).

1.6 Health Needs Assessment (HNA) & Population Demographics

Wales

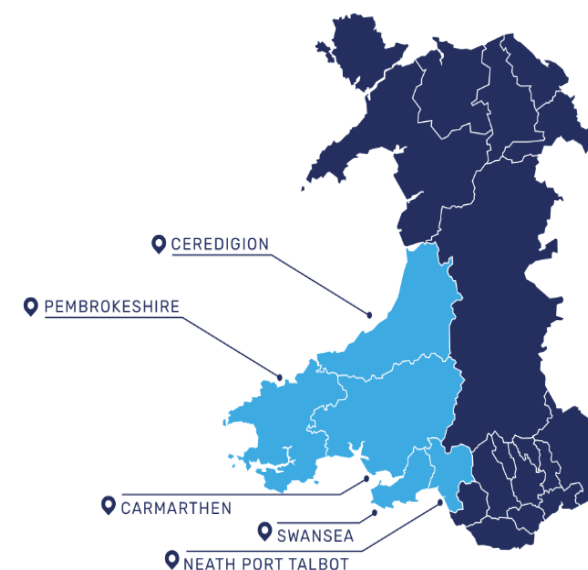
The Welsh population structure is projected to change with a substantial rise in our older population and projected fall in working age adults. The burden of co-morbidities rises substantially with age, 45% of people aged 75+ report having 2 or more longstanding illnesses. Factors like poverty, deprivation, and lifestyle choices (smoking, alcohol, drugs, obesity, physical activity, and employment status) as well as environmental circumstances influence life expectancy and quality of life.

Welsh HNA key points in respect of cancer are summarised as follows:



Hywel Dda HNA Demographics Key Points:

- Covers three West Wales counties (Carmarthenshire, Ceredigion and Pembrokeshire) and covers a quarter of the landmass of Wales.
- Home to estimated 393,000 residents, which at 13 per cent of Wales' population makes the health board area the second most sparsely populated in Wales.
- Relatively little ethnic diversity - Ceredigion is the most ethnically diverse, with over six per cent (6.2%) of residents defining themselves as not being White British or Irish, followed by Carmarthenshire (4.0%) and Pembrokeshire (3.7%).
- Population projected to experience significant growth, from an estimated 389,000 residents in 2016 to approximately 410,000 in 2036. West Wales has a higher proportion of older people than average across Wales, with inward migration a major accelerating factor for the growth of the older population.
- Life expectancy at birth for males is 78.9 years and for females 82.7 years. Of the three counties, life expectancy and healthy life expectancy is higher in Ceredigion.
- Highest concentrations of several different types of deprivation are seen in and around towns including Llanelli (Carmarthenshire), Ammanford (Carmarthenshire), Pembroke Dock (Pembrokeshire) and Cardigan (Ceredigion)



Swansea Bay: HNA and Demographics Key Points

- Projections show the population size will increase;
 - Swansea projected to increase by 9% (3rd largest increase in Wales);
 - NPT projected to increase, then decrease (but to remain higher in 2039 than in 2014), with overall increase of 1.6%.
- Increasing proportion of SBUHB's population define themselves as non-White British or Irish. The highest proportion being found in the City and County of Swansea at 8.5% (20,368) of Swansea's population; above Wales average (6.8%) and 3rd highest of Welsh Local Authorities.
- As in other Welsh HBs, there are areas of deprivation. Of the 323 Lower Super Output Areas (geographic areas with an average population of 1,500 residents and 650 households) across the area 86 (27%) are among the most deprived in Wales, whilst 74 (23%) are in the least deprived fifth.
- Life expectancy variance between males living in the least and most deprived areas is 9.7 years. Between the least deprived and most deprived area there is an even larger gap in healthy life expectancy of over 20 years. This is higher than the Wales average (8.8 years gap in life expectancy; 18.7 years gap in healthy life expectancy).
- Life expectancy variance between females living in the least and most deprived areas is 7.6 years. Between the least deprived and most deprived areas the gap in healthy life expectancy is approximately 18 years.
- The difference in life expectancy between the least deprived and most deprived areas in Swansea Bay shows no clear sign of reducing.

1.7 Engagement and Learning Approach

The importance of engaging with stakeholders is acknowledged to share this regional work, which seeks to improve cancer services for the benefit of patients across South West Wales. It is also necessary to gain support from key stakeholders to progress the plans to change cancer services for the better; and take opportunity to learn from peers and share good practice.

Engagement and learning from others to date has been reflected in the SPC. Throughout the development process, initial awareness sessions have been held with each of the three Community Health Councils (CHCs) whose patients flow into the SWWCC, namely Hywel Dda; Powys and Swansea Bay CHCs. Sessions were also held with Velindre Cancer Centre (VCC), Wales Cancer Network (WCN) and Welsh Health Specialised Services Committee (WHSSC). Engagement with Velindre Cancer Centre particularly focused on learning from their programme to develop the 'satellite' centre in Nevill Hall hospital, and the drivers for choosing this as their preferred site (e.g., travel times; infrastructure; clinical support). Additionally, engagement has been undertaken with the Beatson West of Scotland Cancer Centre, which is the largest cancer centre in Scotland and is the lead centre for non-surgical cancer care for the West of Scotland. Its geography (in terms of spread and rurality) and service model provide a useful comparator for the options to develop our services on a regional basis.

The programme of engagement will be ongoing and fundamental as the SPC moves from its current strategic stage to the implementation/delivery phase. Stakeholder involvement will be key in any options appraisal processes and the development of business cases to secure investment for services as required.

2. Case for Change

2.1 Demand and Capacity

Across Wales there was a 25% increase in new cancer diagnoses in 2019 compared to 2002 caused, in the main, by an increased number of older people who have the highest risk of cancer. In the Cancer Action Plan for Wales 2022, WCN reflects there is an urgent need for Wales to improve cancer services and outcomes and reduce health inequalities. Additionally, Wales faces the cancer recovery challenge of increasing capacity both to deal with the rising numbers of patients presenting with new diagnoses and the challenge of reducing the escalating waiting times for tests and treatment for patients already diagnosed with cancer. Increased pressure on the system is being driven by the increasing number of new cancer patients needing non-surgical treatment, rising by an estimated 165,000 each year. In addition to the rising increase in oncological treatment options for cancer patients with increased survival outcomes. This includes patients with relapsed and metastatic disease therefore remaining under long term follow up with longer treatment pathways.

Demand for cancer services is also generated by:

- A growing and ageing population with more complex care needs;
- Increased screening to support earlier diagnosis and detection in cancer;
- Patient needs and expectations, which includes availability to latest treatments – which are becoming more complex and numerous due to advances in technology and clinical research.
- Provision of non-surgical oncology services needs to match demand – increasing by ~2% year on year

In 2021/2022 as part of early development work for the SPC, an initial demand and capacity exercise was undertaken to establish baselines for oncology activities delivered in the SWWCC. The exercise provided an initial overview of current service levels in the context of demand, capacity, and activity levels, where this data was available. Some outpatients data was not fully available due to the complexity of how data is recorded, e.g., referrals are received by tumour site, but activity is shown by consultant who often cover multiple tumour sites in their practice. A broad outline of activity completed across 2 years (2019/2020 and 2020/2021) was provided, as well as a view of workload by tumour site and expected changes to activity in the future. Key points are included in the following current service provision sections.

2.2 Current Service Provision

As set out by the Cancer Quality Statement (2021), delivery of cancer services in Wales focuses on embedding and further developing the single cancer pathway (SCP) and its underpinning nationally optimised pathways the vehicle that will support the delivery of consistent, high-quality care and improved cancer outcomes. National Optimal Pathways (NOPs) have been developed to provide a platform to standardise care, reduce variation and drive improvements within each of the cancer (tumour site) pathways to:

- meet the SCP cancer waiting time of 62 days for patients presenting with a suspicion of cancer
- improve cancer patient experience
- improve cancer patient outcomes throughout Wales to that comparable with the best outcomes in Europe.

NOPs describe the optimal steps, sequence, and associated timings in a patient's cancer pathway, across each of the tumour sites as these pathways differ. NOPs describe all routes of entry onto the pathways from point of suspicion (PoS), good practice diagnostic and treatment pathways (and opportunities for improvement) and where patients should receive consistent information and support diagnostic steps, investigations, and treatments. The diagnostic pathway, including staging, should be performed within 28 days from point of suspicion and definitive treatment commenced within 21 days from Decision to Treat (DTT) date. First definitive treatment; defined as the start of the initial intervention (treatment) aimed at removing or eradicating the patient's cancer completely or reducing tumour bulk and stabilising their symptoms; may be surgical or non-surgical (chemotherapy/ anti-cancer treatment including hormone /endocrine /immunotherapy, or radiotherapy) depending on the tumour site and/or type of cancer and also taking into account individual patient factors – this is agreed on by the Cancer Multidisciplinary Team (MDT) on a patient case by case basis. The SCP applies to around 10% of radiotherapy patients and there are specific Time to Radiotherapy metrics which are reported to WG – see subsequent section for details.

This SPC encompasses the stage of the pathway following POS and diagnostic stage, with referrals made to oncology for non-surgical oncology treatment as agreed by the MDT (of which oncology is a key stakeholder in this).

2.2.1 Radiotherapy Services

Radiotherapy (RT) is a key treatment for cancer, to achieve good survival outcomes and quality of life. Radiotherapy uses radiation to kill cancer cells and may be used in the early stages of cancer or after it has started to spread. Approximately 50% of all patients require radiotherapy as part of their cancer treatment and this is projected to increase to 60% by 2025. The SWWCC provides radiotherapy treatment using machines called Linear Accelerators (LinAccs) for patients in the South West Wales region, activity is split approximately 50/50 for patients from SBUHB and HDdUHB. The SWWCC currently operates with four LinAccs and one decant bunker, which is essential for replacing equipment without loss of treatment capacity, as replacement can take up to a year.

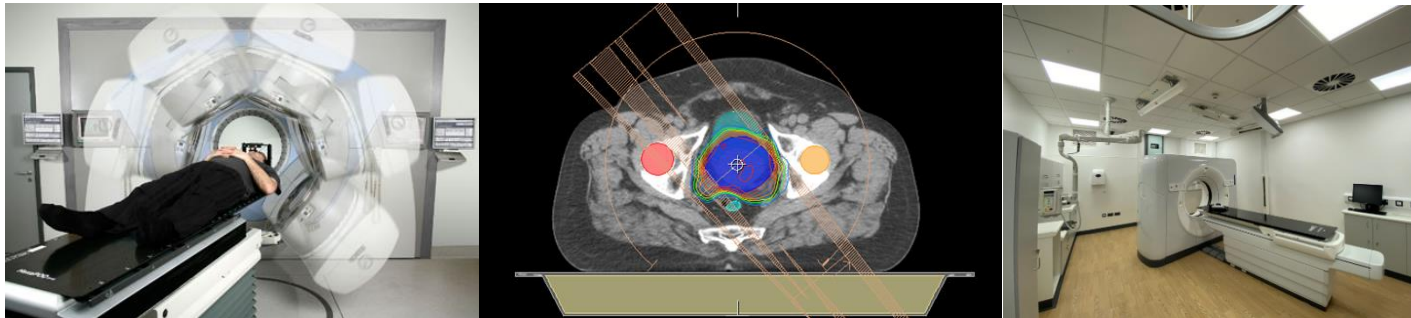
Radiotherapy Baseline Activity (2019/2020 and 2020/2021) Key Points:

- RT is given in a number of visits, generally Monday to Friday to be most effective. Patient visits vary by treatment site and complexity from 1 to 30 visits (also referred to as radiotherapy 'fractions' /#).
- **Capacity** - is broken down into two elements:
 - The capacity to see new patients for consent, to image, plan and prescribe RT – this is human resource dependent, and the SWWCC has capacity to provide this for 2,200 patients (increasing in 2022/2023 to 2,400 due to the adoption of new treatment for prostate cancer; Also ability to scan is dependent on CTSim capacity and to some degree the NP ability is dependent on clinic room availability.
 - The capacity to deliver the treatments - some human resource dependence, but crucially dependent upon linear accelerator provision (LinAcc). This is a fixed resource as it relates to the provision of the LinAcc machines.
- SWWCC has 4 LinAccs in total. 4 LinAccs operating hours 8.30 – 17.45 5 days per week/ 52 weeks per year. Equates to maximum capacity for 7,500 attendances/ slots per LinAcc (average slot = 18 mins). There is a loss of circa 10-15% of clinical time due to machine breakdowns, servicing and training requirements.
- **Total activity 2019/2020 = 2,239 patients treated / 29,222 attendances/ slots;** of which 1,145 patients (accounting for 14,441 attendance slots) were SBUHB patients, and 1,083 patients (accounting for 14,713 attendances/ slots) were HDdUHB patients. Only 3 CTMUHB patients (35 attendances/ slots) and 8 PTHB (33 attendances/ slots) were treated in the period.
- Activity undertaken in 2020/2021 reduced due to COVID, however 1847 (82%) patients were still treated and activity split by HB remained consistent, i.e. around 50/50 split of SBUHB and HDdUHB patients, with limited activity undertaken for CTMUHB and PTHB patients.
- activity split by HB remained consistent, i.e. around 50/50 split of SBUHB and HDdUHB patients, with limited activity undertaken for CTMUHB and PTHB patients.
- Using 2019/2020 as baseline:

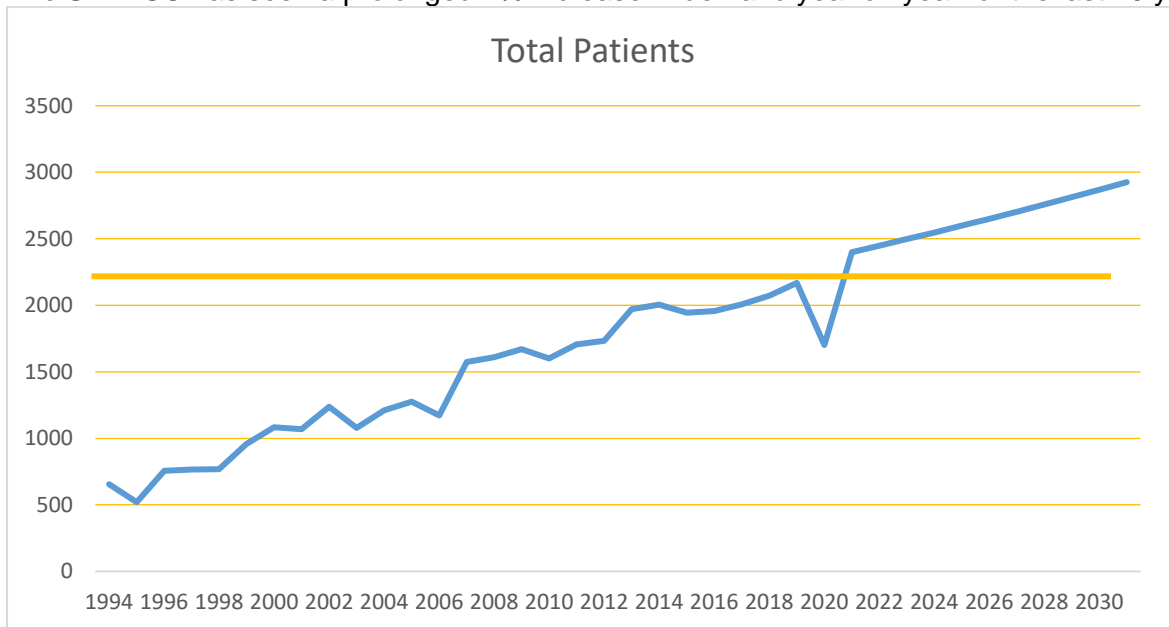
Tumour site (Highest volume)	Attendances 19/20				
	Total	SBUHB	HDdUHB	PTHB	CTMUHB
1. Urology (prostate)	8,108 =	3,956	4,152	-	-
2. Breast	7,124 =	3,105	4,004	15	
3. Head and Neck	3,177 =	1,575	1567	-	35
4. Lower GI (colorectal)	1,992 =	808	1184	-	-
5. Gynae	1,819 =	1,149	670	5	-

RT services currently operate at full capacity and it is expected that the SWWCC will return to delivering 30,000 attendances per year. Replacement of the (previously) oldest LinAcc (LinC) completed in 2022 has enabled the SWWCC to introduce hypo-fractionation to prostate, breast, and specialist treatments (WHSSC funded Stereotactic Lung Radiotherapy). In 22/23 the oldest machine, 4th LinAcc (LinD) is undergoing replacement as per the All-Wales Replacement Programme, with the capital business case approved by WG in 2021/22 and machine purchased and expected to be clinical in summer 2023. The department will then have a fleet of 4 LinAccs all with Surface Guided Radiotherapy (SGRT) capable of delivering the latest treatments.

In addition, the SWWCC has one CT scanner (CT Sim). CT Scanners are fundamental to radiotherapy. Every radiotherapy patient has a specialist radiotherapy CT scan prior to commencing their treatment, to immobilise the patient in the treatment position, localise the tumour, and all organs at risk, and facilitate accurate radiation dose calculations. Historically the SWWCC had 2 Simulators; 1 CT-Simulator and 1 Conventional simulator. As technology has changed, the conventional simulator was no longer fit for purpose, was end of life and withdrawn from service. The recent replacement CT-Simulator was housed in this space, therefore the SWWCC has space to house 2 x CT-Simulators. An additional CT scanner is seen as a priority for the Radiotherapy service. Current data shows 4-6 day waits for a CT scan, this restricts the 14 day pathway attainment



The SWWCC has seen a prolonged 2% increase in demand year on year for the last 20 years:



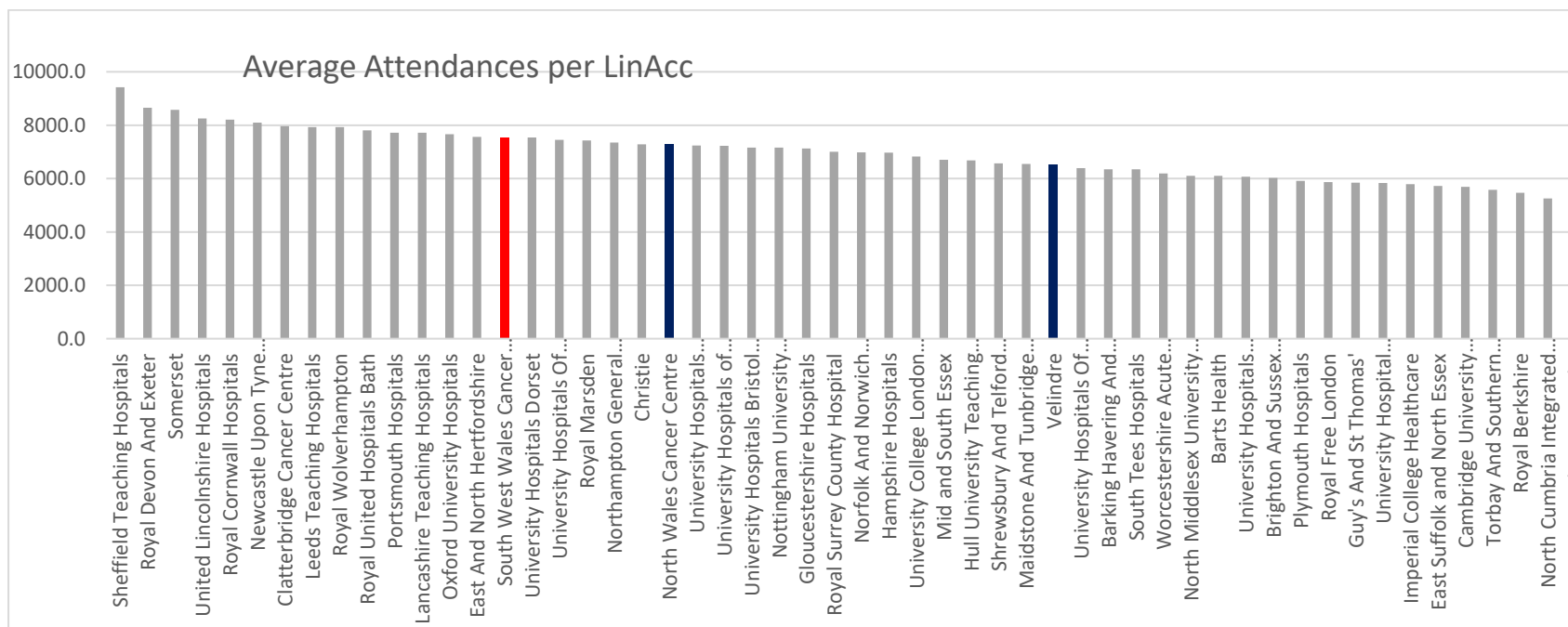
Across Wales, the number of patients seen per year and the number of LinAccs per centre was captured in the All-Wales Radiotherapy Services Peer Review, undertaken in 2022 by the WCN. This demonstrates RT LinAcc levels in Wales are below English and European comparators; high incomes countries have 8 LinAccs per million population, Western Europe 6.9 per million population, UK 5.2 per million population, overall, Wales has less than 5 per million. In addition, population comparison data across the three Welsh Cancer Centres is described below:

In Wales, it is recognised that the SWWCC is below recommendations for numbers of LinAccs. The breakdown of population and size of RT centre is as follows (2020), data taken from Health Inspectorate Wales (HIW) self-assessment responses prior to inspection:

Centre	Population (m)	Number of LinAccs	Patients	LinAccs per 1m Population
VCC	1.5	8 (rising to 10 with new cancer centre)	4,466	5.33
SWWCC	1 (incl. SBUHB, HDdUHB, Bridgend and Powys population)	4	2,400	4
NWCTC	0.7	4	1,802	5.7

However, SWWCC has the largest utilisation of machines in Wales and is well positioned across the UK:

Centre	Annual Attendances per LinAcc (2020)
VCC	6,589.9
SWWCC	7,467.0
NWCTC	7,371.3



Radiotherapy current workforce model

Radiotherapy is delivered by a specialist core group of staff, predominantly from three main disciplines (Clinical Oncologists, Therapy Radiographers and Medical Physics).

Radiotherapy Workforce data from each of the three Cancer Centres in Wales, taken from the WCN 'Developing a Sustainable Non-Surgical Oncology Workforce Report 2022, is outlined below:

Cancer Centre	Staff Group <i>*data correct at Feb 22</i>							
	Medical		Radiography (Therapeutic)		Radiography(Diagnostics)		Radiotherapy Physics	
	Headcount	WTE	Headcount	WTE	Headcount	WTE	Headcount	WTE
VCC	115	71.86	101	92.8	-	-	11	10.4
SWWCC	34	26.41	44	36.93	-	-	37	34.91
NWCTC	35	35	46	41.12	-	-	14	13.1

This data shows that SWWCC has the lowest levels (Headcount and WTE) in Wales for medical and radiographer staffing, however has significantly more (headcount and WTE) radiotherapy physics staff than VCC and NWCTC. However, the data does not show the level skill mix/ banding of staff groups to draw comparisons across Wales. In SWWCC, a lack of advanced/ highly skilled staff in Radiotherapy and Radiotherapy physics is considered the biggest gap in the workforce currently, and these will be required even more in the future to plan and deliver increasingly complex treatments.

2.2.2 Oncology Outpatients

Non-surgical oncology outpatient services are delivered across the South West Wales region. The current model has been in place since 2015 as a result of strategic conversations agreed at the time by both Health Boards. HDdUHB do not employ Consultant Oncologists (except for locum Consultant based in Bronglais). Many outpatient clinics are held by a team of oncology trained staff, overseen by a consultant, and often include middle grade doctors (training and non-training grades), specialist nurses and pharmacists. Challenges for the future include recruitment of consultants in general, with additional challenge of travel to peripheral clinics making a post less attractive. There is also an immediate (and ongoing increase) in demand for outpatient clinic capacity across the region, both for expected numbers of patient attendances and the staff required to see them.

- From SBUHB perspective, services are delivered predominantly in Singleton Hospital with a small number of clinics being delivered from Neath Port Talbot Hospital and Morriston Hospital. SBUHB deliver outpatient services for non-surgical oncology for all tumour sites, except for paediatric oncology.
- From HDdUHB perspective, outpatient services are delivered across all the acute hospital sites, with high volume tumour sites (lung, breast, upper GI, lower GI, and urology) provided in Carmarthenshire (Prince Phillip and Glangwili Hospitals) and Pembrokeshire (Withybush Hospital) by visiting SBUHB oncology consultants. However, the provision across the three acute sites in HDdUHB is not consistent by tumour site e.g., breast clinics are provided at Withybush and Prince Phillip but not Glangwili, whereas colorectal clinics are provided in Glangwili only. This contrasts with SBUHB, where all the high-volume tumour sites clinics are provided in Singleton.
- In Ceredigion (Bronglais), the same high volume tumour sites are delivered by a single-handed consultant (locum) who covers the multiple tumour sites
- Across the region, the following tumour sites, head and neck, sarcoma, renal, gynaecology, melanoma, lymphoma (radiotherapy) and brain are delivered from SBUHB, with clinics held in Singleton or Morriston.
- However, SACT tends to be delivered in a unit closest to the patient's home.
- Given that radiotherapy can only be delivered on the SWWCC Singleton site, patients with all tumour sites that receive radiotherapy – have associated outpatient appointments in Singleton.
- In addition, there are no oncology outpatient rehabilitation service across the region. At present patients are referred to generic outpatient / community rehabilitation services. However, many cancer patients do not meet the criteria of the generic services due to their complex needs and requirements for specialist input.
- Oncology currently has 21 Consultants; 12 full time and 9 part time (all employed by SBUHB). There are 8 Medical Oncologists and 15 Clinical Oncologists, 2 NHS locums, 3 Specialist Grade and 5 Agency consultants (delivering 45 sessions per week). Total Delivery medical sessions = 262 sessions. **See Appendix 1 for full detail on SWWCC workforce and clinic information (correct at October 2022)**

2.3 Current Performance / Key Indicators

Key Points

- **Oncology treatments are failing to meet the needs of our population and our waiting times for palliative and radical treatments do not meet national oncology guidelines and mandatory targets.**
- Delays in starting SACT and RT can negatively impact on outcome. In patients receiving SACT as part of a planned pathway to shrink the cancer and allow radical treatment with either surgery or radiotherapy, a delay in the initiation of treatment can lead to a deterioration in the patient's clinical condition and prevent radical treatment options.

2.3.1 Single Cancer Pathway Performance

National ministerial target = 75% patients start their first definitive cancer treatment within 62 days from the point of suspicion, regardless of referral route).

The Single Cancer Pathway (SCP) is now an embedded policy and performance target for Health Boards and Trusts to comply with across NHS Wales, reporting their compliance to Welsh Government. From December 2020 the target set was at least 75% patients to start their first definitive treatment within 62 days of the point of suspicion. The expectation is for 80% compliance by 2026 for all Health Boards.

Neither HDdUHB or SBUHB are meeting the national SCP targets – however to note this measure includes all aspects of the cancer pathway and is not exclusive to non-surgical oncology treatments. This performance position is in line with the rest of Wales – Wales Cancer Network notes that Cancer waiting times are now the worst they have ever been with only 53% of patients starting their first treatment within 62 days in May 2022. No Health Board in Wales has met the target of 75% since July 2020.

2.3.2 Radiotherapy Wait Times

Key performance indicators have been developed for RT which were consulted and agreed on an All-Wales basis through the Clinical Oncology Sub Committee (COSC). Until 30th September 2022, the RT Wait Time quality metrics and targets were as follows:

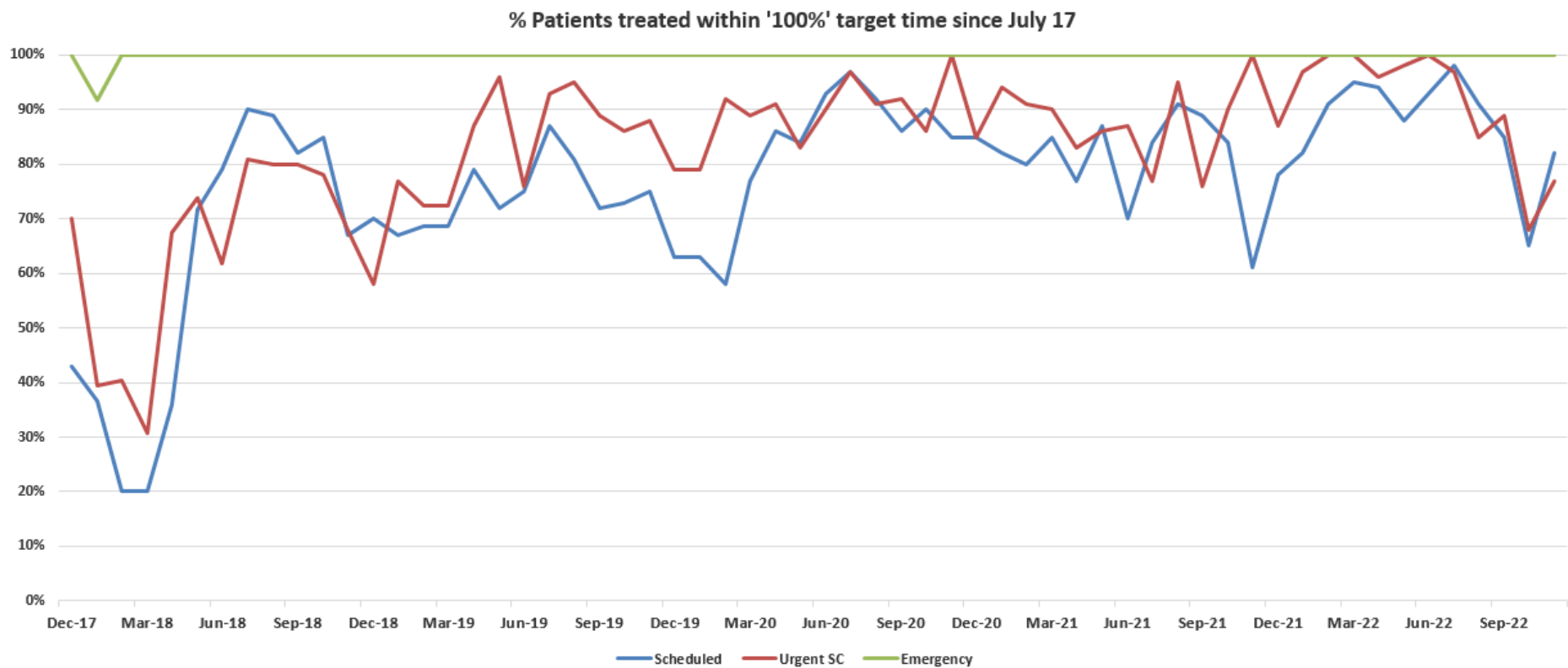
Category	RT Start	Target
Scheduled	28 days	100.00%
	21 days	80.00%
Urgent SC	14 days	100.00%
	7 days	80.00%
Emergency	2 days	100.00%

	1 day	80.00%
Elective Delay	28 days	100.00%
	21 days	80.00%

Further reduction of the waiting time targets came into effect from 1st October 2022, these are:

Category	RT Start	Target
Scheduled	21 days	100.00%
	14 days	80.00%
Urgent SC	7 days	100.00%
	2 days	80.00%
Emergency	1 day	100.00%
	0 day	80.00%
Elective Delay	14 days	100.00%
	7 days	80.00%

The SWWCC experiences more demand than capacity (and so, generates a waiting list) and demonstrates overall poor compliance in the Time to RT performance metrics. Most patients have a 21-day target from consent to start of treatment (now 14-day target as of October 22).



Note the dip in recent performance reflects the change in the Time to RT metrics as per the table so 100% target time has changed from 28 days to 21 days. In fact in November 22 we recorded our best ever 21 day performance

The performance position has improved in recent years due to the introduction of hypofractionation; this safely reduces the number of treatment visits (or 'fractions' of a radiotherapy course) for some patient groups, enabling more patients to be 'fitted' into the existing capacity. Hypofractionation has allowed SWWCC to increase the number of patients treated within the existing fixed number of slots available. Prior to the introduction of Breast Hypofractionation (undertaken in 2020/2021), the average number of visits per patient was 15, and therefore the centre had a maximum capacity of 2,000 patients.

Adoption of the breast Hypofractionation (300 patients eligible), has reduced visits for those eligible from 15 to 5 treatment visits, reduced the average number of visits to 13.5 visits and has increased LinAcc capacity to 2,200 patients. Adoption of Hypofractionation for prostate patients (288 patients eligible) is agreed for implementation in 2022/2023 (expected from Q3) will further reduce the average number of visits to 12.5, therefore LinAcc capacity will increase to 2,400 patients:

Change	Linacs	Usage	Total attendances	Average Attendances / patient	Patient Capacity
2019 - Baseline	4	7,500	30,000	15	2,000
Breast Hypofractionation	4	7,500	30,000	13.5	2,200
Prostate Hypofractionation	4	7,500	30,000	12.5	2,400

This increased LinAcc capacity has moved the pressures to other parts of the RT pathway such as pre-treat, CT, clinician outlining and planning.

Full details of performance against the RT Wait Time metrics in 21/22, as reported to the Health Boards and WG (via COSC who are responsible for monitoring and overseeing performance) is included as **Appendix 2**.

2.4 Workforce challenges

The development of a sustainable non-surgical oncology workforce is a critical enabler in achieving the best outcomes possible for cancer patients. However, across the UK the ability to attract and retain a fit-for-purpose workforce represents a significant current challenge to delivering fit for purpose non-surgical oncology services.

Significant analysis of the non-surgical oncology workforce has been undertaken recently on a UK and Wales wide basis.

2.4.1 Clinical Oncology UK workforce Census Report 2021, Royal College of Radiologists (RCR)

This highlighted the worryingly increasing mismatch between demand for cancer services and the capacity of the consultant workforce that provides the specialised services (non-surgical oncology). The RCR collected data from the UK's 62 cancer centres in December 2020 to ascertain staff numbers and issues among clinical oncologists.

The report summarised that overall:

- The NHS needs at least another 189 clinical oncologists to meet demand;
- 52% of UK Oncology Clinical Directors state clinical oncologists shortages are affecting patient care;
- Newly trained consultants in 20/21 will only fill 55% of vacancies;

- If nothing is done to retain exhausted staff and expand the workforce, by 2025 the shortfall of clinical oncologists in the NHS will be between 21–29%.

The report demonstrated the variances in staffing trends and shortages across the UK. RCR data indicates that the clinical oncologist workforce in Wales is currently understaffed by a minimum of 12 WTE consultants, equivalent to a 20% shortfall. This compares to an estimated 17% clinical oncologist shortfall across the UK overall, indicating more severe workforce shortages in Wales. Current forecasts show that the Clinical Oncology workforce in Wales will shrink by 3% in South Wales, with expected retirements of the consultant workforce outnumbering training completions.

RCR data also demonstrated significant variance across Wales in the distribution of clinical oncologist consultants relative to population size. The SWWCC has 17.8 WTE consultants per million population, lower than the UK average of 21.6; this is the worst position in Wales.

2.4.2 Developing a Sustainable Non-Surgical Oncology Workforce, Wales Cancer Network, 2022

This report was led by the WCN and developed using a collaborative approach across the three cancer centres in Wales, examining each organisation's non-surgical oncology service workforce to identify the key enablers to support development of a sustainable non-surgical oncology workforce for Wales.

The report reflected the key issues affecting the non-surgical oncology workforce at the three centres:

- An ageing workforce, specifically there are some areas in the workforce where small numbers of highly specialised staff are nearing retirement age with limited succession planning in place.
- Training places are limited for some roles, particularly those requiring supervised placement.
- Recruitment and retention - the amount of movement between centres during recruitment (i.e., a post may be filled in one centre but that then leaves a gap elsewhere in another centre in Wales), coupled with rurality in large areas of Wales, for example the HDdUHB region, which provides an additional challenge in attraction and recruitment compared to city areas.
- High use of temporary/fixed term contracts, coupled with use of soft monies through charity funded posts.
- Increased requests for reduction in working hours.
- Increased time to train e.g. in Wales the average duration of training for a consultant is now closer to 14½ years linked to breaks for maternity leave or research and less than full time working.
- Staff wellbeing, high workloads, stress, and burnout, compounded by the impact of the Covid-19 pandemic.

The report sets out a series of recommendations across seven key themes, with the intention that recommendations for national work will be taken forward by the Wales Cancer Network working with national bodies e.g., HEIW (Health Education and Improvement Wales) and DHCW (Digital Health & Care Wales), whereas local actions will be taken forward by the three cancer centres. Recommendations for local action across the key themes have been extracted in **Appendix 3**.

In addition to the report, the WCN produced a 'Workforce Shape' document to support the three cancer centres in developing their local workforce plans. This provides a status view of all staff groups involved in delivering non- surgical oncology services, in addition to a summary of key challenges and proposed actions to be undertaken. Summary extracts for each of the staff groups are provided at **Appendix 4**.

2.5 Commissioning Arrangements

Health Boards are funded on a weighted capitation basis to meet the revenue costs of healthcare for their own populations. Funding is deployed to both support provider services delivered within Health Board boundaries and to commission services from other provider organisations where patients are accessing services external to the Health Board.

Inter Health Board commissioning is transacted through an LTA (Long Term Agreement) funding flows mechanism intended to ensure that provider organisations are reimbursed for the volume and complexity of activity undertaken on behalf of the commissioning health board.

Swansea Health Board Funding Flows

The externally commissioned services provided by SBUHB can be summarised as:

- Admitted Patient Care, Regular Day Attenders, and Outpatient attendances – Funding is based on historic volumes and unit costs – and adjusted for on a marginal basis based on in-year activity levels.
- Radiotherapy – Funding is provided on a block basis – the historic baseline has been uplifted periodically to reflect the additional enhanced cost of service developments (e.g., Replacement LinAccs).
- SABR – From April 2022 these treatments will be funded via WHSSC on a cost per case basis.
- NICE – Commissioning Health Boards are recharged for the cost of NICE approved drugs consumed by their respective populations.
- In addition, SBUHB provides support to HDdUHB provider services – for instance for the provision of outreach consultant sessions through a Service Level Agreement (SLA)

The value of the funding flows arising from these commissioning arrangements are summarised below:

	Hywel Dda	Powys	Bridgend	WHSSC
Admitted patient care	783,540	76,259	109,201	
Regular day attendance	235,634	120,058	96,915	
Outpatients	719,644	42,444	161,198	
Radiotherapy	3,421,539	212,382	139,022	
SABR*				142,000
NICE drugs*	1,886,776	461,802	440,681	
SLA	402,575			
Total	7,449,708	912,946	947,018	142,000

Hywel Dda University Health Board Funding Flows

Similar to SBUHB, the externally commissioned services provided by HDdUHB can be summarised as:

- Admitted Patient Care, Regular Day Attenders, and Outpatient attendances – Funding is based on historic volumes and unit costs – and adjusted for on a marginal basis based on in year activity levels
- NICE – Commissioning Health Boards are recharged for the cost of NICE approved drugs consumed by their respective populations.
- In addition, HDdUHB provides support to Powys provider services – for instance for the provision of outreach consultant sessions -through a Service Level Agreement (SLA).

The value of the funding flows arising from these commissioning arrangements are summarised below:

	Swansea Bay	Powys	Betsi Cadwaladr
Admitted Patient Care	4,362	56,372	118,243
Regular Day Attendance	12,215	355,965	217,304
Outpatients	14,001	32,384	15,518
Ward Attenders	-	7,861	5,912
NICE Drugs	4,962	56,500	41,293
SLA		5,893	
Total	35,539	514,975	398,270

Internal Commissioning

There are no formal internal commissioning arrangements within either SBUHB or HDdUHB around the treatment of each Health Board’s own population by its own provider services. Funding for provider services is devolved to operational budgets on an incremental basis to cover cost pressures and developments approved through internal business case processes.

Capital Funding

Health Boards receive separate funding streams to support capital expenditure directly from Welsh Government. Health Boards are required to bid for funding to support the capital programmes, with where support where relevant from other commissioners of the relevant services.

3. Regional Radiotherapy Services: Future Plans

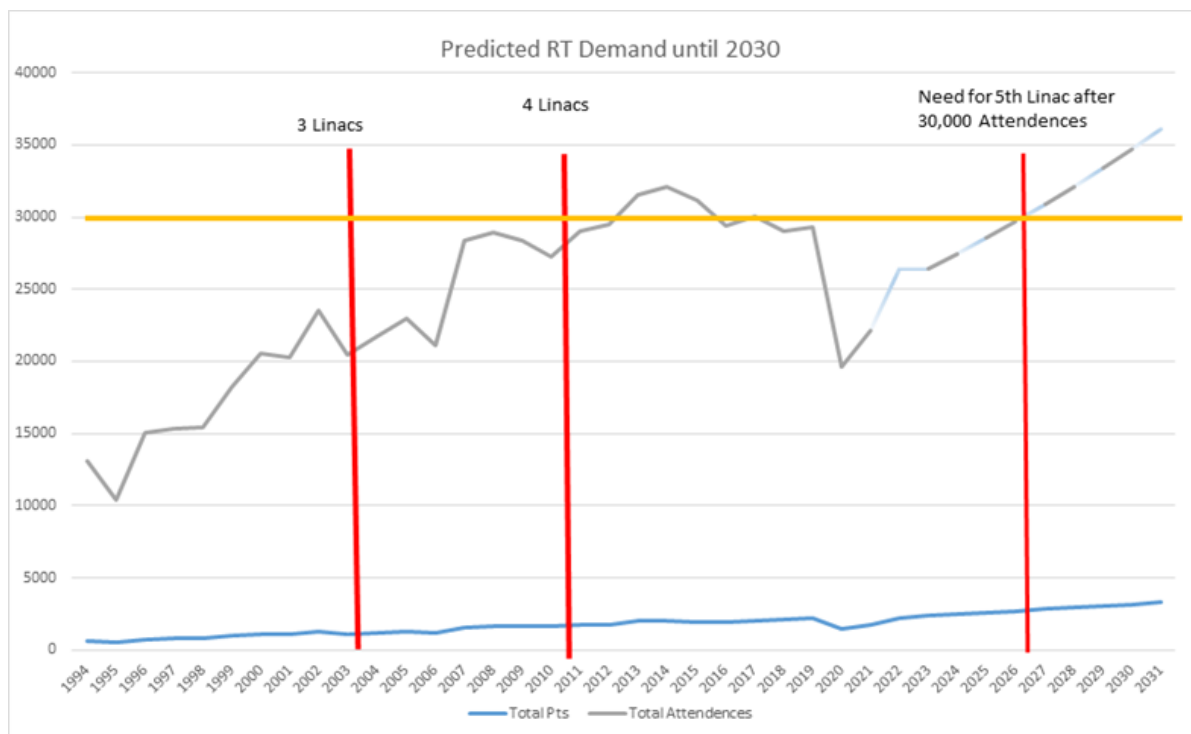
3.1 Radiotherapy Infrastructure Plan 22/23 – 33/34

At the end of March 2022, the Clinical Oncology Sub Committee (COSC), of Welsh Scientific Advisory Committee reporting to Welsh Government, requested that all Welsh Cancer Centres provide Radiotherapy 10-year Equipment Plans, including IT infrastructure. This was required to support planning of All Wales capital, as Radiotherapy infrastructure is a significant major capital investment. The final RT Infrastructure Plan submitted to WG on 30th June 2022 as approved by both SBUHB and HDdUHB, is included as **Appendix 5**.

In summary, the plan articulates that the SWWCC needs an additional (2nd) CT Sim in 2023/24 and an additional (5th) LinAcc needs to be in situ for the region by 2026/27.

Key Points: RT Linacs

- 4th LinAcc replacement as per All Wales Replacement Programme, capital approved by WG in 2021/2022 and expected to be clinical in 2023.
- By 2023 SWWCC will have 4 upgraded LinAccs fully enabled with latest technology and able to operate at maximum treatment capacity (1 Linac = 7,500 attendances/# per year therefore 4 LinAccs total capacity = 30,000 attendances/# per year).
- Replacement of the oldest machine (LinC) was clinical by July 2022; prior to this operating at 75% max capacity due to breakdown or unable to use due to its limited technology capability.
- Hypofractionation adoption = 20% increase in patients through existing LinAcc capacity, taking treatment capacity from 2,000 patients to 2,400 patients /year
- RT demand expected to increase by ~3% on year, however developments above have delayed the need for additional (5th) LinAcc (incl. 6th bunker/ 2nd CT). At the time of initial PBC development in 2019, 5th LinAcc expected to be imminently required due to predicted demand exceeding 30,000 attendances/ #s
- Latest D&C modelling demonstrates the need to move to 5th LinAcc service model in 2026/2027, due to demand exceeding 30,000 attendances/ # (equating to the maximum capacity of 4 Linac). As 5th LinAcc development would form a major capital business case seeking investment from WG, detailed planning to inform development of the business case would need to commence in 2023/2024.
- There are options to site the 5th LinAcc inside or outside of the SWWCC. It is recognised that HDdUHB have expressed an ambition to deliver more specialist services locally, e.g. RT, and this position is supported by SBUHB. Selection of the preferred site of 5th LinAcc will be determined through a robust options appraisal process – see subsequent section for details on the proposed approach and draft assessment criteria developed to date.



Key Points: CT Sim

- CT Sim is integral to RT treatment planning. Currently only 1 in SWWCC.
- Data shows currently 4-6 day wait for a Radiotherapy CT Scan
- Additional (2nd) CT Sim is indicated in the SWWCC in 2023/2024
- Latest D&C modelling forecasts demand (2,400 patients) to exceed CT maximum capacity = 2,000 patients in 2022/23 (~Oct) due to return to pre-COVID demand and realising service efficiencies through developments, e.g. hypofractionation adoption.
- New WG Time to RT metrics operational from Oct 2022 and limited CT capacity presents biggest barrier to achieving the targets.
- 2nd CT Sim development requires WG Capital investment (circa £750k for machine).
- However 2nd CT Sim is associated with significant revenue impacts for both Health Boards – pay and non-pay implications.
- The intention to develop a regional business case in 23/24, in which the workforce and financial implications detail for 2nd CT Sim will be outlined, is set out in both Health Boards IMTPs 2023/2026.

3.2 Radiotherapy 10 Year Vision and Benefits

SBUHB and HDdUHB aim provide regional radiotherapy services that:

Are fit for purpose in the 21st century	As evidenced by:
In which capacity is matched to demand for services, supporting improved patient access and outcomes	<ul style="list-style-type: none"> • Improved patient flow, improved clinical adjacencies and wayfinding; • Replaced obsolete equipment with modern equipment on a timely basis as per best practice guidance; • Provision of a suitable environment and infrastructure for patients, which is compliant with NHS guidance and best practice and technical standards; • Satisfied all legal and governance requirements (The Ionising Radiation (Medical Exposure) Regulations (IRMER), 2017, The Ionising Radiations Regulations (IRR), 2017, Medical Devices Regulations etc.).
Are considered excellent, quality services that benchmark well on a national/ international basis	<ul style="list-style-type: none"> • Improved equity of access for patients in Wales, i.e.: improved radiotherapy waiting times and thereby directly improved outcomes for cancer patients; • Improved experience of patients and their carers; • Improved safety and quality requirements as per best practice.
Offer improved service efficiencies	<ul style="list-style-type: none"> • Delivery of operational benefits, for example, implementing more efficient working practices and redesign patient pathways; • Workforce modernisation/restructuring and supported extended roles, e.g., by transferring traditional roles to other healthcare professionals where clinically appropriate to do so.
Promote service effectiveness	<ul style="list-style-type: none"> • Improved patient survival outcomes in the longer term, improved performance against national cancer measures for cancer diagnosis and treatment, e.g., by meeting RT waiting time targets and contribution to overall Single Cancer Pathway performance that meets national targets
Support service economies	<ul style="list-style-type: none"> • Creation of suitable facilities allowing repatriation of services currently delivered outside of Wales (e.g., prostate radionuclide therapy) to provide a less costly and more acceptable and local service for patients

Further detail on benefits / outcomes will be described in subsequent business cases for investment, and these will be categorised as cash releasing and non-cash releasing benefits, with appropriate quantification provided.

3.3 Radiotherapy Service Planning – 10 Year Plans

GOAL	METHOD	Workforce Impact (Y/N)	Finance (Revenue) Impact (Y/N)	Finance (Capital) Impact (Y/N)
YEARS 1-3 (2023/2024, 2024/2025, 2025/2026) - DETAIL AS PER HEALTH BOARD IMTPs 2023-2026				
Sustain and expand regional radiotherapy cancer treatment services, improving access and quality of services for patients in SBUHB and HDdUHB	Deliver 4th LinAcc (Lin D) replacement business case at SWWCC, Singleton <i>*Year 1</i>	Y	Y	Y WG Capital approved 2022
	Develop WG capital business case for 2nd CT SIM at SWWCC <i>*Year 1</i>	Y	Y	Y
	Undertake Strategic Options Appraisal for future regional model/ 5 th LinAcc preferred site in South West Wales and commence development of WG capital business case <i>*Year 1</i>	N	N	N
	Progress intention to commission from WHSSC the first in Wales 'contact/ papillon' low energy portable radiotherapy service in SWWCC for early-stage rectal cancer and implement service if approved <i>*Year 1</i>	Y	Y	Y
	Expand Stereotactic Ablation Radiotherapy Service (SABR) in SWWCC, Singleton, with phased roll out to other tumour sites (for commissioning by WHSSC) <i>*Year 1</i>	Y	Y	N
	Implement and report on RT Standards - Time to RT to include Urgent Symptom Control and Emergency Pathway work; Reporting required on 30d Palliative Intent and 90d Radical Intent RT and SACT Mortality <i>*Year 1</i>	N	N	N
	Implement weekend working for RT - note this relates to improving capacity across the RT pathway, e.g. opportunities to undertake pre treatment/ CT Planning on weekends, not indicated to include RT machine usage as weekend periods are utilised for maintenance <i>*Year 1</i>	Y	Y	N

	Develop specialist advanced practice roles	Y	Y	N
	Further develop Radiotherapy Physics Advanced Roles	Y	Y	N
	Further develop Radiotherapy Physics Weekend working	Y	Y	N
	Develop Radiotherapy Physics Research roles	Y	Y	N
	Develop specialist Radiotherapy Physics IT roles	Y	Y	N
	Develop Consultant Radiographer Strategy	N	N	N
	Develop Apprentice Radiographer practitioner Roles	Y	Y	N
	Develop Palliative Radiographer Led Service	Y	Y	N
	Expand Radiographer Review Service	Y	Y	N
	Adopt Artificial Intelligence based target and Organ at risk outlining	Y	Y	N
	Planning for local implementation of molecular radiotherapy including prostate Lu-177 PSMA - All Wales review being undertaken by WHSSC with potential view to commissioning as specialist service	TBC	TBC	TBC
	Replace critical Treatment Planning software	Y	Y	Y
	Incorporate PET imaging into Radiotherapy Planning and treatment	Y	TBC	Y
	Enhance research development and innovation provision	N	N	N
	Enhance Radiotherapy Service through a range of clinical developments	Y	Y	N
	Develop and implement plan for appropriate patient accommodation – for overnight stays to support patients travelling for RT across the region	Y	N	Y
YEARS 4-5 (2026/2027 – 2027/2028) - NOT EXHAUSTIVE LIST AS SUBJECT TO CLINICAL DEVELOPMENTS/ TECHNOLOGY ADVANCES				
Sustain and expand regional radiotherapy cancer treatment services, improving access and quality of services for patients	Expand to 5 LinAcc model (At SWWCC or Satellite, depending on outcome of preferred site options appraisal in 23/24)	Y	Y	Y
	Maintain / upgrade infrastructure (LinAccs / IT / Services) - All Wales RT replacement programme	N	Y	Y
	Replace Oncology Management System	Y	Y	Y
	Enhance adaptive Radiotherapy provision	Y	Y	Y

in SBUHB and HDdUHB	Expand Consultant Radiographer Service	Y	Y	N
	Expand Consultant Clinical Scientist Service	Y	Y	N
YEARS 6-10 (2028/2029 – 2032/2033) –HORIZON SCANNING, NOT EXHAUSTIVE LIST AS SUBJECT TO CLINICAL DEVELOPMENTS/ TECHNOLOGY ADVANCES				
	Consider MR LinAccs	Y	Y	Y
	MR Simulators	Y	Y	Y
	KV Radiotherapy Service	Y	Y	Y

Full details on workforce and financial implications, both revenue (pay and non-pay impact) and capital will be articulated in individual business cases which will be developed for investment from the Health Boards and/ or Welsh Government as required.

3.4 Radiotherapy Options Appraisal 5th LinAcc

This SPC includes proposals for siting 5th LinAcc inside or outside of the current SWWCC, as the confirmed site will be subject to a detailed options appraisal undertaken as the capital business case is developed.

As outlined above, the **indicative timescales** for the 5th LinAcc are:

- 2023/2024 – Complete strategic options appraisal and confirm preferred future regional model (Q1/Q2), commence developing capital business case on this basis – this would include the detailed assessment / feasibility of the 5th LinAcc site in line with preferred future regional model, from a capital/ infrastructure perspective (Q3/Q4).
- 2024/2025 - Continue to develop capital business case and secure approval from Health Boards and WG to proceed (Q1/Q2); Commence construction of 5th LinAcc (Q3/Q4).
- 2026/2027 – 5th LinAcc required to be in situ and operational to meet demand for RT services.

The SPC sets out the draft Strategic Options Appraisal approach for the future regional model and draft assessment criteria to support determining the preferred option; this template is included as **Appendix 6**.

The **strategic, high-level options** for the future regional model are indicated as:

- Option 1: Retain status quo - continue to deliver RT for the region out of SWWCC, Singleton. SWWCC would be preferred site for 5th LinAcc;
- Option 2: Rebalance provision of RT across the region, with two potential models proposed as part of a Satellite RT Centre in HDdUHB region. Model involves redistribution of existing (4) LinAccs as they become ‘end of life’ and replaced over next 5–10-year period, in addition to new (5th) LinAcc required -
 - 2a) 50/50 split of LinAccs between SBUHB and HDdUHB – all tumour sites treated in both SWWCC and HDdUHB satellite centre.
 - 2b) 80/20 split of LinAccs in SBUHB/ HDdUHB – high volume tumour sites treated in HDdUHB satellite centre.

These proposals and draft documents will be further developed and refined during the options appraisal process as this progresses, particularly in 2023/2024.

It is intended that the process involves a wide range of stakeholders, in both Health Boards and external partners (including the CHC (Community Health Councils)) to ensure all views and perspectives are considered when determining the preferred regional model for the future and location of the 5th LinAcc. The preferred model/ site decision will require formal approval by both Health Boards through respective governance processes.

4. Regional Oncology Outpatients Services: Future Plans

The oncology outpatients workstream was established in 2022 to describe model of delivery for oncology specific outpatients split by tumour site, with a focus on highest volume tumour sites as priority: Lung/ LGI/ UGI/ Breast/ Prostate. Regional tumour site groups completed templates which were developed to provide an understanding of the current service and a vision for the future service (over next 10-year period) including the plans required to progress the service towards the future / desired state.

Key Points: Oncology Outpatients

- Increasing demand for oncology services and cannot demand manage this.
- Scale of geographical challenge – regional delivery across entire South West Wales area to provide ‘care closer to home’ using ‘visiting’ consultant oncologists from SBUHB to HDd (in high volume tumour sites).
- Physical capacity limitations of existing clinic space on acute sites.
- Unsustainable model and ways of working – significant workforce fragilities and service inequities becoming increasingly clear.

4.1 Current model

A number of **key strengths** were identified by the regional tumour site groups. These should be retained where possible in the future regional service model:

- Outpatient clinics are locally delivered across sites in SBUHB and HDdUHB for most tumour sites;
- There has been an increased use of digital solutions since the pandemic - e.g., virtual appointments, this has improved patient experience because of reducing travel and improvement of overall capacity. Also, use of digital dictation introduced in some tumour sites;
- Good CNS support for most tumour sites;
- MDT working – good relationships with key specialities and other centres, increased use of non-medical prescribers, access to therapies.

Key challenges were highlighted which form the basis of the case for change and drivers for changing the current regional model:

- Complexities of covering clinics locally across SBUHB and HDdUHB - geographical challenge presents physical capacity/ infrastructure challenges,
- Workforce fragilities - Limited cross cover – single handed consultants and CNS in some tumour sites, no regional cross cover for secretarial/ admin support;
- Alignment of surgical/ oncology clinics can present delays for complex patient management;
- Inequity of access to CNS support, therapies, and palliative care across tumour sites/ region;
- Limited access to clinical trials due to lack of infrastructure and resource to support this.
- Challenges with capacity/ access to support services, e.g. radiology and pathology.

4.2 Regional Oncology Outpatients Future Model: 'Big ticket' opportunities identified

- **Locations:**
 - Need to expand clinic space– explore 'off site' clinics geographical challenges; agreed current model unable to continue to deliver in the same way across all hospital sites across region as this is unsustainable currently. It will become more unsustainable in the backdrop of increasing demand on cancer services, in addition to increasing impact on the workforce.

- **Workforce:**
 - Clear requirement to increase clinical oncology consultant workforce to provide additional services/ cross cover opportunities and to aid succession planning;
 - Bolster workforce/ address capacity shortfall through adoption of new roles/ scope of roles, for example -
 - Advanced Practitioners, Nurse Consultants, Advanced Radiographers, also continue to utilise/ increase speciality doctor roles and GPs with specialist interests;
 - Increase non-medical prescriber (NMP) provision – extend to all tumour sites, and extend further use of NMP SACT clinics/home care delivery, widen scope of role to request monitoring/follow up scans
 - Increase CNS workforce to provide equitable support across region; further joint working with other Health Boards to provide improved specialist service support across South West Wales region;
 - Dedicated admin support / coordinator roles (band 3-4) across the region, supporting release of CNS time.
 - Increase dedicated allied health professional access (e.g. increase specialist dietetics capacity) and broaden offer, e.g., psychological support and prehab services.

- **Digital/ Equipment:**
 - Continue to offer flexible clinic options for all patients– provide mix of F2F, video, telephone options – all tumour sites to maximise use of digital solutions and provision of equipment (e.g. clinic endoscopy set up in rectal cancer surveillance). Also adopt one single digital dictation system.

4.3 Regional Oncology Outpatients Service Planning – 10 Year Plans

This has been informed by detail provided by tumour site groups on plans required to deliver future visions, based on actions required in Years 1-3, Years 4-5, and Years 6-10. There were limited responses to Years 4-5, and 6-10 planning and this reflects challenges in horizon scanning for oncology services due to the rapid pace of change.

Table below sets out the summary of responses from tumour site groups in respect of plans for Year 1 -3. It is intended that these planning principles form the basis of the ongoing programme of work required to confirm and agree a clear model for regional oncology outpatients. It is key that this programme of work is clinically/ operationally led, with key support from SBUHB and HDdUHB corporate colleagues, for example

workforce planning, digital, transformation / change management and those with demand and capacity modelling expertise. In addition, formal consultation and engagement would be required for proposed service changes to ensure they reflect the needs of the population and consider equality impacts and other factors.

Plans for Year 1-3 (2023/2024 – 2024/2025 – 2025/2026)

Realisation change needs to happen - Cannot continue to deliver services in the same way. Oncology is specialist service, not always able to be delivered closer to home for patients. Messaging will be important.

Workforce Planning is key- Well-being of current staff is important. Significant recruitment and retention challenges due to geographical challenge. Service planning will be impacted by tumour site challenges- specific challenges, increasing demands, pace of new treatment options

Digital can be enabler to the change needed

All responses received from tumour site groups are included as **Appendix 7**.

4.3.1 Benchmarking

Following UK benchmarking, most cancer centres base outpatients service delivery models on factors such as road infrastructure, distance from cancer centre and location of cancer centre. Outreach models for outpatients are based on a proxy of 30/35mile journey, on roads with good infrastructure from the centre – this is considered the maximum reasonable distance of travel expected for consultants based in the centre. Further review and learning from other cancer centres is required in the ongoing programme of work.

4.3.2 Regional Principles/ Proposed Service Model:

The following is considered the *starting point* proposal for the future regional model of oncology outpatients, however this will be further developed and tested (as per ongoing programme of work required referenced above:

It is proposed that the future oncology outpatients' regional model is based on a Hub and Spoke Model. The **Hub** would remain to be the SWWCC in Singleton, with **Spokes** (for delivery of the high-volume tumour site clinics) as Glangwili and Prince Phillip Hospital due to their geographical location and road infrastructure (aligned with 30/35 mile travelling principle for consultants). The high-volume tumour sites are defined as prostate, breast, colorectal, lung and upper GI. In Glangwili and Prince Phillip Hospital spokes, the SBUHB oncology consultant would 'visit' the hospital to provide outpatients clinics for these five tumour sites.

For the other two acute hospital sites in HDdUHB, Withybush and Bronglais, it is proposed that outpatient clinics for the high-volume tumour sites are delivered via digital solutions. Patients would attend the hospital and have support and presence of NMP (CNS or Pharmacist/Staff Grade workforce) in clinic with them, with the oncology consultant based in the SWWCC running a remote/virtual clinic (for example using Attend Anywhere). This remote/ outreach model in Withybush and Bronglais will require additional investment; firstly, to bolster the MDT workforce for in-person clinic support. In addition, to deliver clinic workload currently being undertaken unsustainably by the one locum consultant in Bronglais, as this work would transfer to SWWCC consultant-based team, there would be the need to increase the middle grade staff/nursing/pharmacy support working in these sites to support the virtual model. This would enable the delivery of more sustainable model going forward.

For SBUHB, the intention is to continue to deliver oncology outpatient clinics for all tumour sites out of the SWWCC in Singleton Hospital. However future plans may consider accommodating high volume tumour site outpatient clinics in NPTH site for NPT (Neath Port Talbot) population. NPTH in Port Talbot is less than 30miles from the SWWCC, and this may assist with physical space constraints in SWWCC. There is no intention to provide services at Morriston Hospital, unless there is a clear clinical requirement for this.

The future regional model will need to include an equitable provision of oncology outpatients' rehabilitation services – currently there is no provision for these services in the region and this is impacting on patient outcomes and experience.

Full details on workforce and financial implications, both revenue (pay and non-pay impact) and capital will be articulated in individual business cases which will be developed for investment from the Health Boards and/ or Welsh Government as required.

5. Key Enablers

5.1 Commissioning Impact/ Intentions

SBUHB and HDdUHB are committed to a delivery approach which transforms the SPC into execution. There are several formal commissioning groups that the SWWCC group will link into; these include the Regional Commissioning Group (RCG) which has been established between the two organisations to fulfil their commissioning role collaboratively and the Long-Term Agreements (LTA)/Service Level Agreements (SLA) bi-monthly meetings. Once discussions have matured to the point where commissioning and contracting decisions need to be made, these will be transacted through the LTA meeting, fed up into the RCG and reflected in the necessary contracting mechanisms, with detailed associated service specifications.

In addition, both Health Boards acknowledge that the current commissioning framework is not fit for purpose and will endeavour to develop a mechanism that:

- Provides greater transparency in the relationship between cost, activity, and case mix.
- Supports strategic planning across the region.
- Enables monitoring of performance through more meaningful currencies reflecting advances in technology.
- Ensures equitable commissioner funding contributions based on relative access to provider services.

This framework will need to be developed in parallel with the wider review of funding flows across Wales and the wider development of internal commissioning frameworks within SBUHB and HDdUHB Health Boards.

5.2 Research and Innovation

Patients benefit enormously from research and innovation, with breakthroughs enabling prevention of ill-health, earlier diagnosis, more effective treatments, better outcomes, and faster recovery.

The SWWC has ambition to become a centre conducting original and innovative research both arising from and influencing clinical practice, underpinned by robust clinical, financial and research governance. Linking and correlating genomics, clinical data and data from patients provides routes to new treatments, diagnostic patterns and information helping patients make informed decisions about their care. 'Research-active' services have lower mortality rates, with benefits not limited to those patients who participate in research. The SWWCC has an impressive history of recruitment to systemic therapy trials, we are building on work carried out through a series of academic chairs of medical oncology over the past decade and have developed expertise across in several other areas. However, to realise our aspirations, we need to overcome the current and future barriers. These include:

- **Infrastructure** – physical space for outpatient clinics, delivery of SACT, radiotherapy for increased research and innovation activity
- **Workforce** – clinician time reflecting increased trials associated workload, protected academic time, research nurses and research radiographers

- **Supporting services** – pharmacy, radiology, pathology for trials work
- **Funding** – investment in above, funding follows patient for trial-related investigations across HB boundaries
- **Visibility/branding** – South West Wales often overlooked in favour of the South East

Wales has recently launched its Cancer Research Strategy (CReST), with aims and areas of focus which align well with the SWWCC Research Strategy. (<https://walescancerresearchcentre.org/crest/>). **CReST** acknowledges the Academic workforce needs to grow in Wales and this is supported by **SWWCC** but requires further engagement with HBs and HEIs ensuring we are **promoting and training next generation of academic oncologists**.

Area of focus	CReST	SWWCC
Clinical trials	Y	Y
Precision and mechanistic oncology	Y	Y Cancer Genomics
Immuno-oncology	Y	X
Radiotherapy	Y	Y
Palliative and supportive oncology	Y	X
Population health-based cancer prevention, early diagnosis, primary care, and health services research	Y	Y Big data

SWWCC Research Plans Year 0-2

- Create a **clinical trial SACT delivery unit** on the restructured Singleton site. Co-funded (pro rata) by both SBUHB and HDUHB, with income from running of commercial trials funding ongoing costs
- Scope out the **commercial collaborations** that may increase trial activity – e.g. oncacare
- Scope out the other **ARCH funded innovations** that could include oncology including the ILS at Morriston
- Address the flow of money for trial activity undertaken across HB boundaries
- Scoping possibility for **Hywel Dda increased trial activity**

SWWCC Research Plan Year 3-5

- Move towards a single organisation - **South West Wales Cancer Trials Centre** - that can open a trial, with options for screening of patients and delivery of treatment across any of the multiple sites in South West Wales (pending any necessary local R+D approvals)
- The centre would be the single site for R+D applications for trial opening and would support the delivery of clinical trials across the SWWCC regional footprint
- Scope out trials that can be done in both Hywel Dda and in SBUHB
- **More academic appointments** in conjunction with the University
- Work with Hywel Dda to **define the need on the new hospital site**

SWWCC Research Plan Years 5-10

Move towards the ability to deliver advanced therapies at the Morriston site (will need ICU co-located) – SWWCC at Morriston, akin to the VVC @ UHW model

6. Next Steps/ Recommendations

The SPC is intended to form a formally approved 10-year strategic framework for SBUHB and HDdUHB, in the context of regional non-surgical oncology services. The SPC sets out the status of regionally delivered services (i.e., radiotherapy and oncology outpatients) and articulates the key drivers for change; fundamentally to ensure sustainable services can be provided and the needs of patients undergoing cancer treatment now and, in the future, can be met. The SPC presents the high-level vision and proposed plans for developing these regional services over the next 10-year period. At this point the detail of the resource implications cannot be articulated.

It is recommended that next phase of the work, including determining the detail / impact of proposed regional service models, are developed through a transformation programme approach to implementation/ delivery. The programme will need to be clinically/ operationally led and requires key involvement from a range of colleagues in both Health Boards, including the disciplines of workforce planning, capital planning, commissioning/ finance and digital. The programme is likely to require dedicated project management/ change management resource to lead the work through the business case(s) / delivery phase.

APPENDICES

- **Appendix 1: Oncology workforce and clinic information, October 2022**
- **Appendix 2: SWWCC Radiotherapy performance 2021/2022**
- **Appendix 3: Summary of WCN Non-Surgical Oncology Workforce Report – recommendations for local action**
- **Appendix 4: Summary of WCN Non-Surgical Oncology Workforce Shape document**
- **Appendix 5a and b. Approved SWWCC 10-year RT Infrastructure Plan**
- **Appendix 6. Draft 5th LinAcc Strategic Options Appraisal templates**
- **Appendix 7: Oncology Outpatients future model tumour site responses**

Acknowledgments

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