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MANAGEMENT OF EARLY-STAGE BREAST CANCER WITH AYURVEDA:

A CASE STUDY

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Abstract

Breast cancer is the most commonly diagnosed cancer worldwide, with over 2.3 million new cases and 685,000 deaths reported in 2020, and its incidence is projected to increase to over 3 million new cases annually by 2040. In India, the number of breast cancer cases are rising, with an estimated 200,000 women expected to be affected annually by 2030, particularly among postmenopausal women. Ductal carcinoma, the most prevalent form of breast cancer, accounts for 85-90% of all cases. Ayurveda offers a holistic approach in managing breast cancer, focusing on restoring the balance of *Doshas*, addressing the underlying factors contributing to abnormal cell growth and mitigating chemotherapy side effects. This case study investigates the effects of Ayurvedic treatment on a 65-year-old female diagnosed with low-grade ductal carcinoma of the left breast. The patient presented with burning sensation, swelling and pain in the affected breast, alongside constipation and heartburn. After receiving a comprehensive Ayurvedic treatment plan, including Panchakarma therapies and Ayurvedic formulations, at Shuddhi Ayurveda Panchakarma Hospital in Navi Mumbai, significant improvements were observed. The patient experienced relief from symptoms, including a 70% reduction in the burning sensation, enhanced energy levels and better

digestive health. Follow-up PET CT scans showed a notable reduction in the size of the lesion and no new metastases, suggesting a positive response to the Ayurvedic treatment. The study highlights the potential of Ayurveda as an adjunctive therapy in managing breast cancer, providing symptomatic relief and improving the overall quality of life. However, given the limited sample size, further randomized controlled trials and larger cohort studies are necessary to validate the efficacy and safety of integrated Ayurvedic treatments and establish standardized therapeutic guidelines for cancer care. This study underscores the importance of combining Ayurvedic and Allopathic medical approaches to optimize patient outcomes and enhance holistic care in cancer management.

Keywords

Breast Cancer, Multidisciplinary care, Low-grade cancer, Ayurveda, Panchakarma, *Arbud*, *Granthi*

Introduction

Breast cancer is the most commonly diagnosed cancer worldwide, with over 2.3 million new cases and 685,000 deaths estimated in 2020. The burden of breast cancer is expected to grow to over 3 million new cases per year by 2040^[1]. In India, the incidences of breast cancer are rising, with an estimated 200,000 women expected to be affected annually by 2030. The highest incidences are seen in postmenopausal women ^[2]. Breast tumors most commonly affect the upper outer quadrant of the breast, which is also a common site for benign breast conditions such as fibro adenoma and breast cysts ^[3].

According to the GLOBOCAN (global cancer burden) 2020 report, breast cancer accounts for 24.5% of all new cancer cases and is responsible for 15.5% of cancer-related deaths among the female population worldwide ^[4]. This highlights the significant global health burden of breast cancer and the necessity for a holistic approach to treatment.

Ductal carcinoma of the breast is the most common form of breast cancer, accounting for 85-90% of all cases. Approximately 1 in 28 women are expected to develop breast cancer during their lifetime^[5]. According to the World Health Organization (WHO), several risk factors contribute to the breast cancer, including increasing age, obesity, harmful use of alcohol, family history, history of radiation exposure, reproductive factors, tobacco use and postmenopausal hormone therapy.

Ayurveda suggests that improper *Aahar* and *Vihar* can disturb the balance of *Doshas*, increasing the risk of diseases like *Granthi* and *Arbuda*, which can be correlated with cancer.

Although breast cancer is primarily *Kapha*-predominant, there is always an association of *Vata*, leading to abnormal cell multiplication, while *Dhatvagni* (tissue metabolism) is also diminished. *AyurvedicChikitsa* focuses on correcting these factors involved in the *Samprapti* of such diseases.

Ayurveda provides a holistic approach to manage breast cancer by improving the quality of life and mitigating chemotherapy side effects. Recent studies suggest that Ayurvedic interventions can reduce adverse effects and enhance immune responses in patients undergoing chemotherapy. Key interventions include Ayurveda-mineral formulations, which helps to alleviate nausea and fatigue [6], and palliative care measures, which strengthen overall well-being [7]. Ayurveda, with its 5,000-year-old history, emphasizes Ayurvedic medicines and lifestyle modifications for health and longevity[8]. A recent case study highlights a low-grade ductal breast carcinoma that responded well to Ayurvedic treatment without surgical resection or conventional therapy, demonstrating the potential of Ayurveda in managing such conditions. This study examines the impact of Ayurvedic treatments on a 65-year-old female with breast lower grade carcinoma.

CASE REPORT

A 65-year-old female with left breast lower grade carcinoma visited Shuddhi Ayurveda Panchakarma Hospital, Navi Mumbai, Maharashtra on November 26, 2022. The major complaints were burning sensation, tenderness, swelling and pain at left breast for two months. On examination hard and mild movable lump was felt. Other associated complaints were constipation, gases and heartburn. Her appetite and sleep patterns were normal. Stress factor was also noted.

She gave history of Hypertension and Migraine since last 10 years, for which she was under modern medication. She had past history of Angioplasty twice and Hysterectomy. Her 2D Echo study done in September 2022 was normal with LVEF being 60%. Patient was diagnosed with COVID in 2020. The patient was suffering with constipation since last 10 years. Patient was not willing for surgical resection or any other conventional treatment. Initial assessment details during the visits are mentioned in **Table 1**.

The allopathic medications consumed by the patient were Telmisartan (40mg) + Hydrochlorothiazide (12.5mg), Nitroglycerin (2.5mg), Cilnidipine (10mg), Atorvastatin (20mg), Clopidogrel (75mg) and Aspirin (150mg). A whole-body PET scan was done on November 24, 2022 and December 23, 2023.

Table 1.Initial assessment details during the visits

Date	Blood Pressure (mmHg)	Weight	Pulse/Min	SpO2	Temperature
26-11-2022	130/90	58.3 Kg	86	98%	-
02-12-2022	120/70	56.2 Kg	86	80%	-
03-12-2022	130/70	56.6 Kg	79	97%	-
04-12-2022	110/70	55.1 Kg	86	97%	98 °F
05-12-2022	120/70	55.3 Kg	84	97%	98 °F
06-12-2022	130/70	56.4 Kg	74	98%	96 °F
07-12-2022	120/70	55.5 Kg	73	99%	93 °F
08-12-2022	140/70	55.4 Kg	79	98%	97 °F
10-12-2022	140/80	56 Kg	81	99%	94.6 °F
18-03-2023	150/90	50 Kg	88	92%	-

The patient was admitted for IPD from December 02, 2022 and received 10 days of IPD at Shuddhi Ayurveda Panchakarma Hospital, Navi Mumbai, Maharashtra, following a comprehensive Ayurvedic treatment plan. The daily vitals during the IPD are mentioned in **Table 2**. The treatment plan included Panchakarma therapies such as *Shirodhara* with *Brahmi oil*, *Lepam* with *Dashanga*, *Parisheka* with *Dhanyamla* and *MatraBasti* with *Sahacharadioil*. The patient later discharged on December 13, 2022. The discharge vitals are mentioned in **Table 3**. *Ashtasthanapareeksha* during the discharge is mentioned in **Table 4**.

Table 2 The daily vitals during the IPD

Date	Time	Temperature	Blood Pressure	Pulse/min	SpO2
02-Dec-22	10:00 AM	97.2° F	120/70 mmHg	86	80%
03-Dec-22	9:50 AM	97.2° F	130/70 mmHg	79	97%
04-Dec-22	9:30 AM	98° F	110/70 mmHg	86	97%
05-Dec-22	9:00 AM	98° F	130/80 mmHg	86	98%
06-Dec-22	9:00 AM	96.2° F	130/80 mmHg	74	98%
07-Dec-22	9:55 AM	94° F	122/72 mmHg	74	99%
08-Dec-22	8:55 AM	97° F	140/70 mmHg	79	98%
10-Dec-22	9:00 AM	94.6° F	140/84 mmHg	81	99%
11-Dec-22	9:00 AM	97.4° F	100/80 mmHg	74	98%
13-Dec-22	9:20 AM	97° F	100/80 mmHg	82	98%

Table 3 The discharge vitals

Parameter	Findings
Blood Pressure	130/80 mmHg
Pulse rate	79/min
Weight	56 Kg

Table 4 Ashtasthanapareeksha during the discharge

Parameter	Findings
<i>Naadi</i>	<i>VatajPittaj</i>
<i>Mala</i>	<i>Abadha</i>
<i>Mutra</i>	<i>Avikrita</i>
<i>Jiwha</i>	<i>Saam</i>
<i>Shabda</i>	<i>Spashta</i>
<i>Sparsha</i>	<i>Samsheetoshna</i>
<i>Akriti</i>	<i>Madhyam</i>
<i>Drika</i>	<i>Avikrita</i>

Material and Method

Treatment Protocol

Patient approached to our hospital on November 2022 with the above said complaints. After thorough examination, investigations and assessing *DoshaDushya* involvement, *Nidana* (etiology) and *Lakshanas* (symptoms) following Ayurvedic treatment was planned.

Internal Oral medicines: Considering *Prakriti*, *Dosha* involvement and *Agni*, *Bala* of patient, customized formulations were advised like Dr. Shuddhi Powder, Carcinex Capsule, GranthiharVati, Oncoblaze powder, Ashwagandha Powder. Internal oral medicines were continued for a period 1 year. Patient was examined monthly basis and necessary changes were made in medicines considering *DoshaDushya* involvement.

After 1 month of *Shaman Aushadhi*, Panchakarma Therapy was advised. Amongst the Therapies, *Shirodhara*, *Lepa* like *DashangLepa*, *Parishek* and *MatraBasti* were done for 10 days.

Tailored Dietary recommendation based on Ayurvedic principles were guided and important dietary changes. Alkaline water was suggested to maintain body's alkaline acid environment, which is known to prevent and fight Cancer. Diet was focused on intake of fresh fruits, vegetables and millets. Patient was advised to avoid wheat, rice, non-vegetarian, heavy to digest foodstuff. Herbal tea was given as substitute to regular intake of tea, coffee or other cold beverages.

Mind Body Practices: Regular Yoga and meditation sessions aimed at managing Stress, improving emotional well - being and fostering overall balance. Patient was advised to do bare foot walking and sun gazing.

An accurately designed DIP Diet was provided to the patient to complement the Ayurvedic treatments administered for Cancer^[9,10,11]:

I. Diet Plan:

Dietary Recommendations from Shuddhi Ayurveda Panchakarma Hospital:

- Avoid wheat, refined foods, dairy, coffee, tea, and packaged foods.
- Do not eat after 8 PM.
- When eating solid foods, take small bites and chew each bite 32 times.

Hydration:

- Drink alkaline water 3-4 times daily, along with herbal teas, "living" water, turmeric water and coconut water.

Meal Timing and Meal Structure:

- Early Morning (5:45 AM): Herbal tea and Curry leaves in a manner that 1 leaf in 1 minute/ 5 leaves in 5 minutes with raw turmeric and ginger.
- Breakfast (9:00 AM): Fruits and sprouts with almond milk.
- Lunch (12:30 PM - 2:00 PM): Plate 1: Salad; Plate 2: Millet Shake or millet recipes.
- Evening Snacks (4:00 PM): Green juice (100-150 ml) prepared of 10 curry leaves, 2 Ajwain leaves, 5 Giloy leaves, 2-inch Aloe Vera, 2 Neem leaves, 5 Tulsi, Dhania, Pudina and ½ Paan and 4-5 almonds.
- Dinner (6:00 PM): Plate 1: 4 types of raw vegetables with raw turmeric and ginger.

Fasting:

- It is recommended to fast once a week.

Special Instructions:

- Sit in sunlight for 1-hour morning and evening.
- Offer thanks to the divine before eating or drinking.

II. Lifestyle Recommendations

1. Include meditation as a method for relieving stress.
2. Practice Yoga (*Sukshma Pranayama and sukhāsana*) 40 minutes daily.
3. Aim for 6-8 hours of restful sleep each night.
4. Walk briskly for 30 minutes daily, preferably barefoot on natural surfaces like grass, to improve circulation and foster a deeper connection with nature.
5. Follow a balanced and structured daily routine that supports equilibrium between meals, physical activity, and rest, helping to promote long-term health and vitality.

III. Panchakarma procedures administered to patients

1. Parisheka with Dhanyamla

Procedure

- **The Dhanyamla diluted with warm water.**
- **The practitioner sprinkled the mixture over the body, starting from the head and moving downwards.**
- **The treatment lasted 10-30 minutes, with a gentle massage in specific areas.**

Physiology and Mode of action

- *Dhanyamlais* Ayurvedic medicine that promotes detoxification, supports digestion and balances skin pH.
- They stimulate the lymphatic system, enhances nutrient flow and possess analgesic and anti-inflammatory properties.
- *Dhanyamla* balances *Vata* and *Kaphadoshas*, fostering calmness, mental relaxation and clarity [12].

2. Shiroabhyanga with Brahmi oil

Procedure

- **Brahmi oil was gently warmed to a comfortable temperature.**
- **The warm Brahmi oil was applied to the scalp, head, neck and shoulders using gentle, rhythmic strokes.**
- **The massage focused on stimulating circulation, relaxing muscles and nourishing the skin, with special attention given to the joints and areas of tension.**
- **The massage lasted for 20-30 minutes.**
- **After the massage, the patient rested briefly to allow the oil to penetrate the skin and tissues.**

Physiology and Mode of Action

- *Shiroabhyanga* with Brahmi oil is a therapeutic head massage that stimulates circulation, relaxes muscles and nourishes the scalp.
- It enhances blood flow, reduces tension, mental fatigue, and stress, and improves cognitive function.
- Brahmi oil balances *Pitta* and *Vatadoshas*, promoting emotional stability, physical health, and mental clarity [13,14].

3. Lepam over breast with Dashanga

Procedure

- *Dashanga* was ground into a smooth paste using water to achieve the desired consistency.
- The patient was positioned comfortably in a relaxed, supine posture and the medicinal paste was evenly applied to the breast, gently massaged with circular motions.
- The paste remained on the breast for 15-30 minutes, ensuring it stayed moist for continuous therapeutic effects.
- After the prescribed time, the paste was gently removed with warm water and a soft cloth, followed by a brief rest and optional light oil application to nourish the skin.

Physiology and Mode of action

- Dashanga, Ayurvedic formulation with strong anti-inflammatory and analgesic properties, reduce inflammation, alleviate pain and improve circulation.
- These Ayurvedic medicine balances *Vata* and *Pitta*, restoring harmony.
- The massage promotes blood flow, supports tissue healing and aids toxin removal [15].

4. *Matra Basti* with *Sahacharadi oil* (40 ml)

Procedure

- The 40 ml of *Sahacharadi oil* was warmed to body temperature.
- The person laid on left side, in a comfortable position and the lubricated enema nozzle was gently inserted into the rectum.
- The oil was slowly released into the rectum using an enema bag or bulb, and held for 15-20 minutes for absorption.

Physiology and Mode of action

- *Sahacharadi oil*, absorbed through the rectal mucosa, lubricates and hydrates the intestines, promoting smoother bowel movements and reducing constipation.
- It calms the nervous system, balances *Vata* dosha and supports colon cleansing.
- The oil nourishes gastrointestinal tissues, reduces inflammation and alleviates conditions like hemorrhoids and anal fissures. [16,17]

Medicinal Interventions

The Ayurvedic treatment employed in this case included Dr. Shuddhi Powder, Granthi Har Vati, Carcinex Capsule, Hrid Care Capsule, JS-LIV III, Immuno care Syrup, Onco Blaze Churna, Divya Shakti Powder, Relivon Powder, Dr. Immune tablet, 32 Herbal Tea and Aswagandha powder along with Panchakarma therapies.

The medications administered during the IPD are described in **Table 5**. The medications advised during the time of discharge are mentioned in **Table 6**. The patient came for first follow up on January 01, 2023, the medications advised on that day are described on **Table 7**. She returned for follow up on March 18, 2023 and the medications prescribed during the

visit are detailed in **Table 8**. The medications advised during the next visit was on May 04, 2023 are depicted in **Table 9**. The patient returned on August 26, 2023, the Ayurvedic medications prescribed during the visit are mentioned in **Table 10**. The medications prescribed on the visit on November 26, 2023 are mentioned in **Table 11**.

Table 5 The medications administered during the IPD

Medicine	Ingredients	Dosage	Therapeutic Effects
Dr. Shuddhi Powder	Trikatu , Triphala , Nagarmotha (<i>Cyperus rotundus</i>), Vay Vidang (<i>Embelia ribes</i>), Chhoti Elaichi (<i>Elettaria cardamomum</i>), Tej Patta (<i>Cinnamomum tamala</i>), Laung (<i>Syzygium aromaticum</i>), Nishoth (<i>Operculina turpethum</i>), Sendha Namak , Dhaniya (<i>Coriandrum sativum</i>), Pipla Mool (<i>Piper longum</i> root), Jeera (<i>Cuminum cyminum</i>), Nagkesar (<i>Mesua ferrea</i>), Amarvati (<i>Achyranthes aspera</i>), Anardana (<i>Punica granatum</i>), Badi Elaichi (<i>Amomum subulatum</i>), Hing (<i>Ferula assafoetida</i>), Kachnar (<i>Bauhinia variegata</i>), Ajmod (<i>Trachyspermum ammi</i>), Sazikhar , Pushkarmool (<i>Inula racemosa</i>), Mishri (<i>Saccharum officinarum</i>)	Half a teaspoon HS (<i>Nishikal with koshna jala</i>)	Used for detoxification
Granthi Har Vati	Kachnar (<i>Bauhinia variegata</i>), Gugglu (<i>Commiphora wightii</i>), Amalki (<i>Phyllanthus emblica</i>), Bibhitika (<i>Terminalia bellirica</i>), Haritiki (<i>Terminalia chebula</i>), Shunti (<i>Zingiber officinale</i>), Marich (<i>Piper nigrum</i>), Pippal (<i>Piper longum</i>), Varuna (<i>Crateva religiosa</i>), Sukshamala , Dalchini (<i>Cinnamomum verum</i>), and Tamal Patar (<i>Cinnamomum tamala</i>)	2 TAB BD (<i>Adhobhakta with koshna jala</i>)	Used for thyroid dysfunction, enlarged lymphnodes, breast lump, PCOD, weight loss, fibroids, endometriosis and obesity
Carcinex Capsule	Guduchi powder (<i>Tinospora cordifolia</i>), Kirattikta powder (<i>Andrographis paniculata</i>), Maricha powder (<i>Piper nigrum</i>), Paneer Dodi powder (<i>Hedychium spicatum</i>), Amlaki rasayan powder (<i>Phyllanthus emblica</i>), Tamra bhasma powder , Swarnamakshik Bhasma , Kalmegha (<i>Andrographis paniculata</i>), Neem powder (<i>Azadirachta indica</i>), Lavang powder (<i>Syzygium aromaticum</i>), Abhrak Bhasma powder	1 CAP BD (<i>Adhobhakta with koshna jala</i>)	Used for Arbud/Granthi, LRTI, cell rejuvenation and boosts immune system
Hrid Care Capsule	Lahshun Bl. Ext. (<i>Allium sativum</i>), Arjun Bk. Ext. (<i>Terminalia arjuna</i>), Brahmi Lf. Ext. (<i>Bacopa monnieri</i>), Giloy St. Ext. (<i>Tinospora cordifolia</i>), Makoy Fr. Ext. (<i>Solanum nigrum</i>), Sargandha Sd. Ext. (<i>Rauwolfia serpentina</i>), Shankh Bhasma	1 CAP BD (<i>Adhobhakta with koshna jala</i>)	Used for the treatment of various conditions, including coronary artery disease (CAD), hypertension (HTN), acidity, insomnia, high blood pressure, and aortic disease.
JS-LIV III	Aamlaki (<i>Embelia officinalis</i>), Haritaki (<i>Terminalia chebula</i>), Bhumi (<i>Phyllanthus niruri</i>), Himsra (<i>Capparis decidua</i>), Kutki (<i>Picrorhiza kurroa</i>), Mamejak (<i>Enicostemma littorale</i>), Guduchi (<i>Tinospora cordifolia</i>), Kasari (<i>Cymbopogon spp.</i>) [Needs clarification], Kalmegha (<i>Andrographis paniculata</i>), Arjuna (<i>Terminalia arjuna</i>), Bhringraj (<i>Eclipta prostrata</i>), Chitrak (<i>Plumbago zeylanica</i>), Kakmachi (<i>Solanum nigrum</i>), Kasmarda (<i>Cassia occidentalis</i>), Punarnava (<i>Boerhavia diffusa</i>), Tulsi (<i>Ocimum sanctum</i>), Vidang (<i>Embelia ribes</i>)	1 CAP BD (<i>Adhobhakta with koshna Jala</i>)	Helps to alleviate hepatic dysfunction, GIT, Hepatomegaly, liver disorders, high cholesterol, pancreatitis and GB stone
Immuno care Syrup	Giloy (<i>Tinospora cordifolia</i>), Aloe vera (<i>Aloe barbadensis</i>), Tulsi (<i>Ocimum sanctum</i>), Daru Haldi (<i>Berberis aristata</i>), Amba Haldi (<i>Curcuma amada</i>), Mulethi (<i>Glycyrrhiza glabra</i>), Kutki (<i>Picrorhiza kurroa</i>), Peepli (<i>Piper longum</i>), Ajwain (<i>Trachyspermum ammi</i>), Kalmegh (<i>Andrographis paniculata</i>), Honey	15 ml BD (<i>Adhobhakta with sama matra koshna jala</i>)	Boosts Immunity, Supports Respiratory Health, Enhanced Liver Function, Improves Digestion and Anti-inflammatory Benefits

Table 6. The medications advised during the time of discharge

Medicine Name	Ingredients	Dosage	Therapeutic Effects
Onco blaze powder	Guduchi powder (<i>Tinospora cordifolia</i>), Kalmegh powder (<i>Andrographis paniculata</i>), Amalaki powder (<i>Phyllanthus emblica</i>), Kantakari powder (<i>Solanum xanthocarpum</i>), Atasi powder (<i>Linum usitatissimum</i>), Jadaber powder (<i>Curculigo orchoides</i>), Haridra powder (<i>Curcuma longa</i>), Sitaphal powder (<i>Annona squamosa</i>), Magnesium Stearate, magnesium silicate	Half a TSF BD (<i>Adhobhakta</i> with <i>koshna Jala</i>)	Manages all type of Arbud/Granthi and boosts immunity
Carcinex Capsule	Guduchi powder (<i>Tinospora cordifolia</i>), Kirattikta powder (<i>Andrographis paniculata</i>), Maricha powder (<i>Piper nigrum</i>), Paneer Dodi powder (<i>Hedychium spicatum</i>), Amlaki rasayan powder (<i>Phyllanthus emblica</i>), Tamra bhasma powder , Swarnamakshik Bhasma , Kalmegha (<i>Andrographis paniculata</i>), Neem powder (<i>Azadirachta indica</i>), Lavang powder (<i>Syzygium aromaticum</i>), Abhrak Bhasma powder	1 CAP BD (<i>Adhobhakta</i> with <i>koshna jala</i>)	Used for Arbud/Granthi, LRTI, cell rejuvenation and boosts immune system
Dr. Shuddhi Powder	Trikatu , Triphala , Nagarmotha (<i>Cyperus rotundus</i>), Vay Vidang (<i>Embelia ribes</i>), Chhoti Elaichi (<i>Elettaria cardamomum</i>), Tej Patta (<i>Cinnamomum tamala</i>), Laung (<i>Syzygium aromaticum</i>), Nishoth (<i>Operculina turpethum</i>), Sendha Namak , Dhaniya (<i>Coriandrum sativum</i>), Pipla Mool (<i>Piper longum</i> root), Jeera (<i>Cuminum cyminum</i>), Nagkesar (<i>Mesua ferrea</i>), Amarvati (<i>Achyranthes aspera</i>), Anardana (<i>Punica granatum</i>), Badi Elaichi (<i>Amomum subulatum</i>), Hing (<i>Ferula assafoetida</i>), Kachnar (<i>Bauhinia variegata</i>), Ajmod (<i>Trachyspermum ammi</i>), Sazzikhar , Pushkarmool (<i>Inula racemosa</i>), Mishri (<i>Saccharum officinarum</i>)	Half a teaspoon HS (<i>Nishikal</i> with <i>koshna jala</i>)	Used for detoxification
Granthi Har Vati	Kachnar (<i>Bauhinia variegata</i>), Gugglu (<i>Commiphora wightii</i>), Amalki (<i>Phyllanthus emblica</i>), Bibhitika (<i>Terminalia bellirica</i>), Haritiki (<i>Terminalia chebula</i>), Shunti (<i>Zingiber officinale</i>), Marich (<i>Piper nigrum</i>), Pippal (<i>Piper longum</i>), Varuna (<i>Crateva religiosa</i>), Sukshamala , Dalchini (<i>Cinnamomum verum</i>), and Tamal Patar (<i>Cinnamomum tamala</i>)	1 TAB BD (<i>Adhobhakta</i> with <i>koshna jala</i>)	Supports thyroid disfunction, enlarged lymphnodes, breast lump, PCOD, weight loss, fibroids, endometriosis and obesity

Table 7 The medications advised on January 21, 2023

Medicine Name	Ingredients	Dosage	Therapeutic Effects
Onco blaze powder	Guduchi powder (<i>Tinospora cordifolia</i>), Kalmegh powder (<i>Andrographis paniculata</i>), Amalaki powder (<i>Phyllanthus emblica</i>), Kantakari powder (<i>Solanum xanthocarpum</i>), Atasi powder (<i>Linum usitatissimum</i>), Jadaber powder (<i>Curculigo orchoides</i>), Haridra powder (<i>Curcuma longa</i>), Sitaphal powder (<i>Annona squamosa</i>), Magnesium Stearate, magnesium silicate	Half a TSF BD (<i>Adhobhakta</i> with <i>koshna Jala</i>)	Manages all type of Arbud/Granthi and boosts immunity
Relivon Powder	Saverna Patri (<i>Luffa aegyptiaca</i>), Misreya , Senda Namal , Sonth (<i>Zingiber officinale</i>), Jang Harar (<i>Chebulic Myrobalan</i>), and Erand Oil (<i>Ricinus communis</i>).	Half a TSF HS (<i>Nishikal</i> with <i>koshna Jala</i>)	helps to manage constipation, indigestion, auto immune disease, undigested metabolic waste and rheumatoid arthritis
Carcinex Capsule	Guduchi powder (<i>Tinospora cordifolia</i>), Kirattikta powder (<i>Andrographis paniculata</i>), Maricha powder (<i>Piper nigrum</i>), Paneer Dodi powder (<i>Hedychium spicatum</i>), Amlaki rasayan powder (<i>Phyllanthus emblica</i>), Tamra bhasma powder , Swarnamakshik Bhasma , Kalmegha (<i>Andrographis paniculata</i>), Neem powder (<i>Azadirachta indica</i>), Lavang powder (<i>Syzygium aromaticum</i>), Abhrak Bhasma powder	2 CAP BD (<i>Adhobhakta</i> with <i>koshna jala</i>)	Used for Arbud/Granthi, LRTI, cell rejuvenation and boosts immune system
Granthi Har Vati	Kachnar (<i>Bauhinia variegata</i>), Gugglu (<i>Commiphora wightii</i>), Amalki (<i>Phyllanthus emblica</i>), Bibhitika (<i>Terminalia bellirica</i>), Haritiki (<i>Terminalia chebula</i>), Shunti (<i>Zingiber officinale</i>), Marich (<i>Piper nigrum</i>), Pippal (<i>Piper longum</i>), Varuna (<i>Crateva religiosa</i>), Sukshamala , Dalchini (<i>Cinnamomum verum</i>), and Tamal Patar (<i>Cinnamomum tamala</i>)	2 TAB BD (<i>Adhobhakta</i> with <i>koshna jala</i>)	Supports thyroid disfunction, enlarged lymphnodes, breast lump, PCOD, weight loss, fibroids, endometriosis and obesity
Hrid Care Capsule	Lahshun BI. Ext. (<i>Allium sativum</i>), Arjun Bk. Ext. (<i>Terminalia arjuna</i>), Brahmi Lf. Ext. (<i>Bacopa monnieri</i>), Giloy St. Ext. (<i>Tinospora cordifolia</i>), Makoy Fr. Ext. (<i>Solanum nigrum</i>), Sarpagandha Sd. Ext. (<i>Rauvolfia serpentina</i>), Shankh Bhasma	1 CAP BD (<i>Adhobhakta</i> with <i>koshna jala</i>)	Used for the treatment of various conditions, including coronary artery disease (CAD), hypertension (HTN), acidity, insomnia, high blood pressure, and aortic disease.

Table 8. The medications prescribed during the follow up on March 18, 2023

Medicine Name	Ingredients	Dosage	Therapeutic Effects
Onco blaze powder	Guduchi powder (<i>Tinospora cordifolia</i>), Kalmegh powder (<i>Andrographis paniculata</i>), Amalaki powder (<i>Phyllanthus emblica</i>), Kantakari powder (<i>Solanum xanthocarpum</i>), Atasi powder (<i>Linum usitatissimum</i>), Jadaber powder (<i>Curculigo orchoides</i>), Haridra powder (<i>Curcuma longa</i>), Sitaphal powder (<i>Annona squamosa</i>), Magnesium Stearate, magnesium silicate	Half a TSF BD (<i>Adhobhakta</i> with <i>koshna Jala</i>)	Manages all type of Arbud/Granthi and boosts immunity
Carcinex Capsule	Guduchi powder (<i>Tinospora cordifolia</i>), Kirattikta powder (<i>Andrographis paniculata</i>), Maricha powder (<i>Piper nigrum</i>), Paneer Dodi powder (<i>Hedychium spicatum</i>), Amlaki rasayan powder (<i>Phyllanthus emblica</i>), Tamra bhasma powder , Swarnamakshik Bhasma , Kalmegha (<i>Andrographis paniculata</i>), Neem powder (<i>Azadirachta indica</i>), Lavang powder (<i>Syzygium aromaticum</i>), Abhrak Bhasma powder	1 CAP BD (<i>Adhobhakta</i> with <i>koshna jala</i>)	Used for Arbud/Granthi, LRTI, cell rejuvenation and boosts immune system
Hrid Care Capsule	Lahshun Bl. Ext. (<i>Allium sativum</i>), Arjun Bk. Ext. (<i>Terminalia arjuna</i>), Brahmi Lf. Ext. (<i>Bacopa monnieri</i>), Giloy St. Ext. (<i>Tinospora cordifolia</i>), Makoy Fr. Ext. (<i>Solanum nigrum</i>), Sarpgandha Sd. Ext. (<i>Rauwolfia serpentina</i>), Shankh Bhasma	2 CAP BD (<i>Adhobhakta</i> with <i>koshna jala</i>)	Used for the treatment of various conditions, including coronary artery disease (CAD), hypertension (HTN), acidity, insomnia, high blood pressure, and aortic disease.
Dr. Immune tablet	Kesar (<i>Crocus sativus</i>), Shudh Kuchla (<i>Strychnos nuxvomica</i>), Ashwagandha Ext. (<i>Withania somnifera</i>), Shatawari Ext. (<i>Asparagus racemosus</i>), Pipali (<i>Piper longum</i>), Tulsi (<i>Ocimum sanctum</i>), Laung (<i>Syzygium aromaticum</i>), Choti Elaichi (<i>Elettaria cardamomum</i>), Sonth (<i>Zingiber officinale</i>), Haldi (<i>Curcuma longa</i>), Loh Bhasma (<i>Ferrum</i>), Swaran Makshik Bhasma (<i>Chalcopyrite</i>), Mukta Shukti Bhasma (<i>Pinctada margaritifera</i>)	1 tablet BD (<i>Adhobhakta</i> with <i>koshna jala</i>)	Helps to flush out toxins from the body, Improves digestion, Helps in balancing the hormones, Boost immunity and Improves the blood flow

Effectiveness of Ayurvedic Treatments: The assessment was done after every 15 days and it was found to be very much satisfactory in terms of symptomatic relief and quality of life. Burning sensation at left breast region was reduced by 70%. Other complaints like heartburn, gases, constipation was reduced. Her bowel movement was clear, appetite was improved, energy levels increased and overall general condition was improved.

The patient was on regular follow up till November 2023 (i.e. for about 1 year) without any major complaints related to disease, and was able to do all routine household activities.

Table 9. The medications advised during the visit on May 04, 2023

Medicine Name	Ingredients	Dosage	Therapeutic
Carcinex Capsule	Guduchi powder (<i>Tinospora cordifolia</i>), Kirattikta powder (<i>Andrographis paniculata</i>), Maricha powder (<i>Piper nigrum</i>), Paneer Dodi powder (<i>Hedychium spicatum</i>), Amlaki rasayan powder (<i>Phyllanthus emblica</i>), Tamra bhasma powder , Swarnamakshik Bhasma , Kalmegha (<i>Andrographis paniculata</i>), Neem powder (<i>Azadirachta indica</i>), Lavang powder (<i>Syzygium aromaticum</i>), Abhrak Bhasma powder	1 CAP BD (<i>Adhobhakta</i> with <i>koshna jala</i>)	Used for Arbud/Granthi, LRTI, cell rejuvenation and boosts immune system
Onco blaze powder	Guduchi powder (<i>Tinospora cordifolia</i>), Kalmegh powder (<i>Andrographis paniculata</i>), Amalaki powder (<i>Phyllanthus emblica</i>), Kantakari powder (<i>Solanum xanthocarpum</i>), Atasi powder (<i>Linum usitatissimum</i>), Jadaber powder (<i>Curculigo orchoides</i>), Haridra powder (<i>Curcuma longa</i>), Sitaphal powder (<i>Annona squamosa</i>), Magnesium Stearate, magnesium silicate	Half a TSF BD (<i>Adhobhakta</i> with <i>koshna jala</i>)	Manages all type of Arbud/Granthi and boosts immunity
32 Herbal Tea	Gauzaban (<i>Echium amoenum</i>), Kulanjan (<i>Alpinia galanga</i>), Choti Elaichi (<i>Elettaria cardamomum</i>), Laung (<i>Syzygium aromaticum</i>), Badi Elaichi (<i>Amomum subulatum</i>), Badiyan Khtay (<i>Illicium verum</i>), Banafsha (<i>Viola odorata</i>), Jufa (<i>Clerodendrum serratum</i>), Ashwagandha (<i>Withania somnifera</i>), Mulethi (<i>Glycyrrhiza glabra</i>), Punarnava (<i>Boerhavia diffusa</i>), Brahmi (<i>Bacopa monnieri</i>), Chitrak (<i>Plumbago zeylanica</i>), Kali Mirch (<i>Piper nigrum</i>), Adoosa (<i>Adhatoda vasica</i>), Saunf (<i>Foeniculum vulgare</i>), Shankh Pushp (<i>Evolvulus alsinoides</i>), Tulsi (<i>Ocimum sanctum</i>), Arjuna (<i>Terminalia arjuna</i>), Motha (<i>Cyperus rotundus</i>), Senaye (<i>Cuscuta reflexa</i>), Sonth (<i>Zingiber officinale</i>), Majeeth (<i>Rubia cordifolia</i>), Sarfoka (<i>Sphaeranthus indicus</i>), Dalchini (<i>Cinnamomum verum</i>), Gulab (<i>Rosa spp.</i>), Green Tea (<i>Camellia sinensis</i>), Giloy (<i>Tinospora cordifolia</i>), Tej Patta (<i>Cinnamomum tamala</i>), Lal Chandan (<i>Pterocarpus santalinus</i>), White Chandan (<i>Santalum album</i>), Pudina (<i>Mentha spicata</i>)	Empty stomach in early morning SOS	Helps to enhance immunity, hyper acidity, kidney, liver and Arbud/Granthi

To evaluate treatment response, PET CT was repeated in November 2023, in comparison to previous PET CT which was done before starting the Ayurvedic treatment, this report revealed No significant FDG uptake. Ill-defined soft density lesion in upper and central outer quadrant of left breast parenchyma, measuring 1.8 x 0.8cm shows significant reduction in size. Non -FDG avid bilateral axillary lymph node noted, largest is 1.2 x 0.7 cm. No significant bilateral axillary, internal mammary and supraclavicular lymph nodes are noted.

Table 10. The Ayurvedic medications prescribed during the visit on August 26, 2023

Medicine Name	Ingredients	Dosage	Therapeutic Effects
Carcinex Capsule	Guduchi powder (<i>Tinospora cordifolia</i>), Kirattikta powder (<i>Andrographis paniculata</i>), Maricha powder (<i>Piper nigrum</i>), Paneer Dodi powder (<i>Hedychium spicatum</i>), Amlaki rasayan powder (<i>Phyllanthus emblica</i>), Tamra bhasma powder , Swarnamakshik Bhasma , Kalmegha (<i>Andrographis paniculata</i>), Neem powder (<i>Azadirachta indica</i>), Lavang powder (<i>Syzygium aromaticum</i>), Abhrak Bhasma powder	1 CAP BD (<i>Adhobhakta</i> with <i>koshna jala</i>)	Used for Arbud/Granthi, LRTI, cell rejuvenation and boosts immune system
Onco blaze powder	Guduchi powder (<i>Tinospora cordifolia</i>), Kalmegh powder (<i>Andrographis paniculata</i>), Amalaki powder (<i>Phyllanthus emblica</i>), Kantakari powder (<i>Solanum xanthocarpum</i>), Atasi powder (<i>Linum usitatissimum</i>), Jadaber powder (<i>Curculigo orchoides</i>), Haridra powder (<i>Curcuma longa</i>), Sitaphal powder (<i>Annona squamosa</i>), Magnesium Stearate, magnesium silicate	Half a TSF BD (<i>Adhobhakta</i> with <i>koshna jala</i>)	Manages all type of Arbud/Granthi and boosts immunity
Hrid Care Capsule	Lahshun BI. Ext. (<i>Allium sativum</i>), Arjun Bk. Ext. (<i>Terminalia arjuna</i>), Brahmi Lf. Ext. (<i>Bacopa monnieri</i>), Giloy St. Ext. (<i>Tinospora cordifolia</i>), Makoy Fr. Ext. (<i>Solanum nigrum</i>), Sarpgandha Sd. Ext. (<i>Rauvolfia serpentina</i>), Shankh Bhasma	2 CAP BD (<i>Adhobhakta</i> with <i>koshna jala</i>)	Used for the treatment of various conditions, including coronary artery disease (CAD), hypertension (HTN), acidity, insomnia, high blood pressure, and aortic disease.
Aswagandha powder	Ashwagandha (<i>Withania somnifera</i>)	Half a TSF BD (<i>Adhobhakta</i> with <i>koshna jala</i>)	Supports immune system, reduce stress and have anti inflammatory properties

Table 11 The medications prescribed on the visit on November 26, 2023

Medicine Name	Ingredients	Dosage	Therapeutic Effects
Carcinex Capsule	Guduchi powder (<i>Tinospora cordifolia</i>), Kirattikta powder (<i>Andrographis paniculata</i>), Maricha powder (<i>Piper nigrum</i>), Paneer Dodi powder (<i>Hedychium spicatum</i>), Amlaki rasayan powder (<i>Phyllanthus emblica</i>), Tamra bhasma powder , Swarnamakshik Bhasma , Kalmegha (<i>Andrographis paniculata</i>), Neem powder (<i>Azadirachta indica</i>), Lavang powder (<i>Syzygium aromaticum</i>), Abhrak Bhasma powder	2 CAP BD (<i>Adhobhakta</i> with <i>koshna jala</i>)	Used for Arbud/Granthi, LRTI, cell rejuvenation and boosts immune system
Onco blaze powder	Guduchi powder (<i>Tinospora cordifolia</i>), Kalmegh powder (<i>Andrographis paniculata</i>), Amalaki powder (<i>Phyllanthus emblica</i>), Kantakari powder (<i>Solanum xanthocarpum</i>), Atasi powder (<i>Linum usitatissimum</i>), Jadaber powder (<i>Curculigo orchoides</i>), Haridra powder (<i>Curcuma longa</i>), Sitaphal powder (<i>Annona squamosa</i>), Magnesium Stearate, magnesium silicate	Half a TSF BD (<i>Adhobhakta</i> with <i>koshna jala</i>)	Manages all type of Arbud/Granthi and boosts immunity

RESULT

The histopathology reports of May 17, 2024 denoted that there was no extensive in situ component, lymphovascular emboli, perineural invasion and all margins were free from tumor. Whole body PET CT scan reports on November 24, 2023 are in **Fig 1**. ¹⁸F-Fluorodeoxyglucose PET CT scan on April 14, 2023 are depicted in **Fig 2** and December 23, 2023 are depicted as **Fig 3**. The FNAC report is imaged in **Fig 4**. The histopathology report on May 17, 2024 **Fig 5**. The PET CT scan results during the treatment period is mentioned in **Table 12**. The pain score during the IPD treatment is mentioned in **Table 13**.

Table 12 The PET CT scan results during the treatment period

Date	Description
24-Nov-22	A prominent left axillary node measuring about 1.8 × 1.2 cm with no significant FDG uptake (SUV max-1.2), and showing maintains fatty hilum)
14-Apr-23	An ill-defined soft tissue lesion is seen in left breast parenchyma with no significant increased FDG uptake 17 × 15 mm
23-Dec-23	No significant FDG uptake is noted in the ill-defined soft tissue density lesion in the upper and centrl outer quadrant of left breast parenchyma measuring approximately 1.8 × 0.8 cm shows significant reduction in size.

Table 13. The pain score during the IPD treatment

Date	02-12-2022	13-12-2022
Pain Score (0-10)	0-3	0

Implications for Future Research

This study examined the effects of Ayurvedic treatments on a patient with low-grade breast carcinoma, showing promising results, including significant symptomatic relief and improved overall well-being. While these findings are encouraging, the study's small sample size limits its ability to be generalized. To confirm the safety, efficacy and consistency of Ayurvedic treatments for breast cancer, further research involving larger patient cohorts is essential. Randomized controlled trials (RCTs) are needed, as they are the gold standard for clinical research, minimizing bias and ensuring reliable results. Larger studies would also help to assess the long-term effects of Ayurveda and explore its potential synergy with conventional treatments like chemotherapy. Such research could lead to the development of standardized therapeutic guidelines, providing healthcare providers with evidence-based practices for integrating

Ayurveda into cancer care. Ultimately, these findings could enhance patient outcomes by offering complementary treatment options alongside conventional therapies.

DISCUSSION

The positive outcome observed in present case study encourages the promising future of Ayurvedic treatment in breast cancer symptom management. Addressing not only the physical dimensions but also the emotional and lifestyle factors deliver enhanced treatment outcome. According to Ayurveda, Breast Cancer can be cured by balancing *Doshas* of the body. The line of treatment is done according to balance of *Rog* and *Rogi*. Ayurveda literature describes it as increased *Mansa* and *MedaDhatus* in *Stana* (breast) causing *Dushtastanarbud*^[5]. These changes are attributed to imbalance of *Tridosha*.

Ayurvedic treatment for breast cancer includes *Shodhana* (detox therapies like Panchakarma), *Shamana* (Ayurvedic medicines like Ashwagandha, and Turmeric), *Rasayana* (immune-boosting tonics), dietary modifications, lifestyle changes (Yoga, meditation), and external therapies. It integrates well with modern treatments to enhance immunity, reduce side effects, and improve overall well-being.

Based on the symptoms, evaluation of *Dosha*, *Agni*, *Bala* and *Prakruti*, the chosen Ayurvedic formulations targeted the *Agni* (digestion and metabolism), *VataShaman* (Which helps in controlling abnormal growth of cells) and enhancing *Ojas*. According to Ayurveda, *Stana*(breast) are considered *Updhatu* of *Rasadhatu*. Hence, treatment was also focused on reducing *Rasadushti* and improving quality of *Rasadhatu*. In present case study, Stress was a crucial observation. Ayurveda mentions *Chinta* as one of the causative factors of *Rasa Dushti*^[18,19]. Therefore, therapy like *Shirodhara* helped the patient in stress management. The *samprapti*^[20,21] for this case is depicted in **Fig 6**. *Sampraptighataka* of the case is depicted in **Fig 7**.

In Ayurveda, breast cancer develops due to *Dosha-Dushya Sammurchana*, primarily involving *Kapha* dominance with *Vata-Pitta* imbalance. The affected *Dushyas* include *Rakta*, *Mamsa*, and *Meda*, with impaired *Raktavaha*, *Mamsavaha*, and *Medovaha Srotas*, leading to *Stroto Dushti* (*Sanga* and *Granthi* formation). Weakened *Agni* (*Mandagni*) and deep-seated pathology (*Madhyama Rogamarga*) further aggravate the condition. Ayurvedic interventions target these *Samprapti Ghatakas* through detoxification, metabolic enhancement, and immune support. Panchakarma therapies like *Parisheka*, *Matra Basti*, and *Lepam* eliminate toxins, balance *Kapha-Vata*, and prevent tumor progression. *GranthiHarVati* and *Onco Blaze*

Churna act as *Lekhana* and *Kaphahara*, reducing tumor bulk, while Dr. Shuddhi Powder enhances digestion and clears blockages. Circulatory support is provided by Hrid Care Capsule and JS-LIV III, improving *RaktavahaSrotas* and nourishing tissues, while Immuno Care Syrup and Dr. Immune Tablet strengthen *Ojas*, aiding immunity. *Lepam* with *Dashanga* enhances local circulation and reduces inflammation. Aswagandha Powder and 32 Herbal Tea restore Agni, prevent toxin accumulation, and rejuvenate tissues. *Shiroabhyanga* with Brahmi Oil soothes *Vata-Pitta*, alleviating stress, while *Parisheka* with *Dhanyamla* detoxifies and regulates *Kapha*, preventing excessive tissue proliferation. This holistic approach disrupts Granthi/Arbud progression, restores physiological balance, and supports healing.

Fig 6. The *samprapti* for this case study

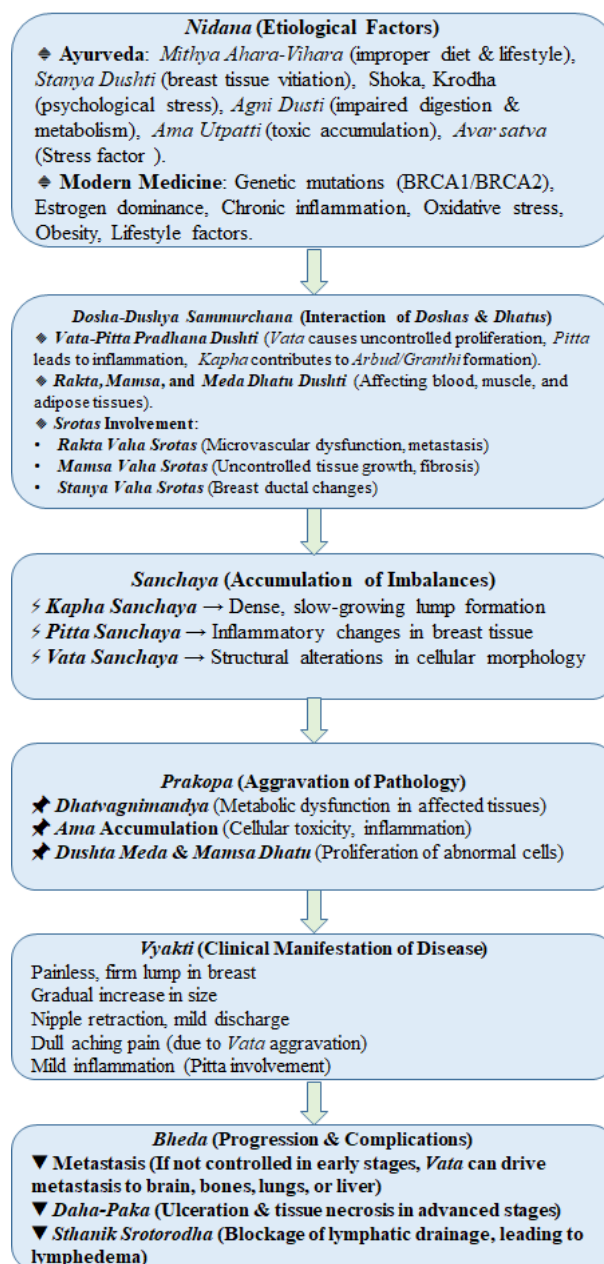
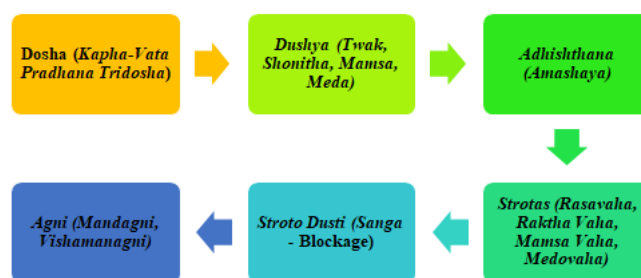


Fig 7. Sampraptighataka of the case study

Improper diet and lifestyle are primary reason which causes imbalance in Dosha. When Agni is affected, there is accumulation of toxins, which blocks the channels of body. A diet rich in fats and low in fruits and vegetables, sedentary lifestyle, lack of exercise, increasing age play significant role in disease development. Hence, necessary dietary changes are made and thus symptoms like constipation, heartburn, gases were seen to be reduced in patient.

According to Ayurveda, *Panchkarma* therapies treat the affected tissues indirectly by eliminating vitiated *Dosha*, rejuvenating *Dhatu*s and restoring immunity in Granthi/Arbud patients. This Ayurvedic perspective provides importance of integrating diverse therapeutic modalities for patient centric approach to breast cancer care.

CONCLUSION

This case study highlights the potential of Ayurvedic Treatment in managing symptoms of Breast Cancer, offering a holistic alternative for patients unwilling or unable to undergo conventional therapies like surgical resection or Chemotherapy. Adopting Ayurveda principles can improve patients' wellbeing. Further research and collaboration between traditional and modern medical practices are encouraging to explore integrated approaches to Breast cancer care.

Symptoms: Upon admission, the patient displayed burning sensation, tenderness, swelling and pain at left breast and constipation. Following Ayurvedic inpatient treatment and subsequent care, notable improvements were observed. The patient experienced relief from the symptoms, with no new issues arising, reflecting a significant overall enhancement in health.

Vitals and Investigations: A significant improvement was observed in the symptoms, indicating positive changes in both lifestyle and diet. The PET/CT scan revealed that there was significant reduction in the size of the metabolically inactive left breast parenchymal lesion with no notable new lesions.

In summary, holistic Ayurvedic therapies for Breast cancer have shown promising results, including improvements in PET/CT Scan, vital signs and symptoms. The integration of Ayurvedic treatments helps to alleviate symptoms and enhances overall health. However, further research through comprehensive, well-controlled clinical trials is needed to confirm these findings, establish standardized treatment protocols and provide scientific evidence for the use of Ayurvedic practices in managing breast lower grade carcinoma.

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Thyrocare
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Patient ID: MNP/31257/2022 Age/Sex: 62/F

Date: 24 NOVEMBER 2022

WHOLE BODY PET CT SCAN

Approximately 60 minutes following intravenous injection of 7.2 mCi of ^{18}F -FDG, Whole Body PET/CT scan (with intra-venous contrast) was performed from vertex to mid-thigh, with GE Discovery 600 PET/CT system without breathholding instruction. High resolution CT scan was performed using a dedicated PET scanner with 16 slice/sec MDCT. A separate sequence with breathhold was performed for lung examination. A semiquantitative analysis of FDG uptake was performed by calculating the SUV value corrected for dose administered and patient body weight. The blood sugar at the time of injection was 117 mg/dL.

Case of left breast lump under evaluation; FNAC suggestive of low grade ductal carcinoma. Scan done for initial assessment.

Findings:

BRAIN:

No obvious focal FDG avid or space occupying lesions in the brain parenchyma.
(All brain lesions may not be apparent on an FDG PET and an MRI may be performed if clinically indicated)

Preserved symmetrical FDG uptake in the cerebral cortex, cerebellum, basal ganglia and thalamus.

HEAD AND NECK:

Bilateral paranasal sinuses appear unremarkable.

No significant FDG avid or enlarged cervical or supraclavicular nodes.

Thyroid gland is normal in size with no abnormal FDG uptake.

No other abnormal FDG uptake or lesions seen in the rest of the head and neck region.

THORAX:

Ill-defined soft tissue lesion in the left breast upper outer quadrant with minimally increased diffuse FDG uptake, measuring about $3.2 \times 2.4 \times 2.6 \text{ cm}$ [APxTxCC], SUVmax- 2.28.

No direct cutaneous, pectoral or chest wall infiltration.

No other significant discrete FDG avid lesions involving the rest of the bilateral breast parenchyma.

A prominent left axillary node measuring about $1.8 \times 1.2 \text{ cm}$, with no significantly increased FDG uptake [SUVmax-1.2], and showing maintained fatty hilum.

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CIN: U74120MH2011PLC742819

Fig 1. Whole body PET CT scan reports on November 24, 2022

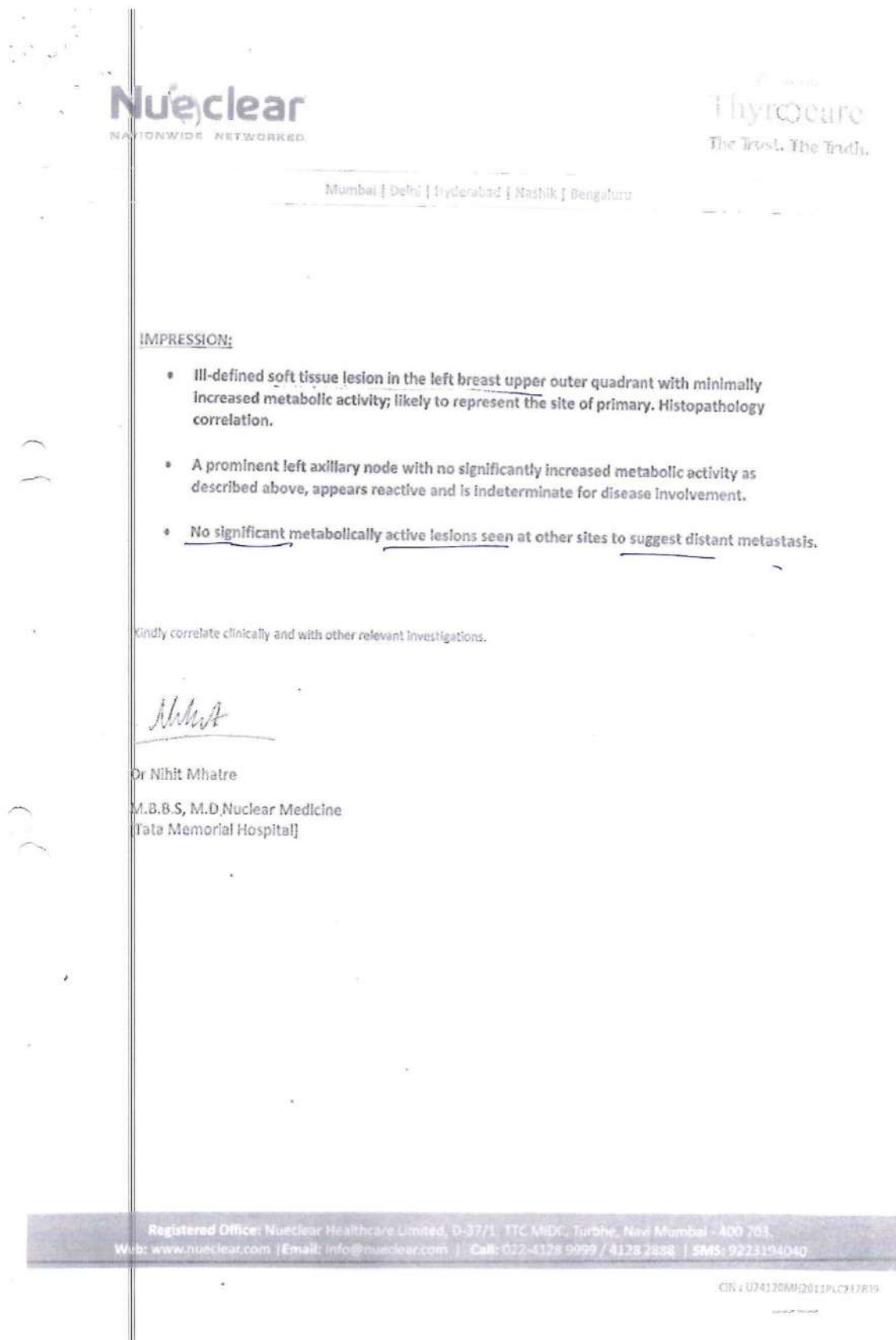


Fig 2.¹⁸F-Fluorodeoxyglucose PET CT scan on April 14, 2023



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DEPARTMENT OF NUCLEAR MEDICINE & MOLECULAR
IMAGING

¹⁸F-Fluorodeoxyglucose PET-CT scan

Date: 14/04/2023

Age: 62 Years Female

Patient Name

Date of Study: 14/04/2023

Patient ID: MNP/31257

Referring Physician:

Whole body FDG PET/CECT scan

Brief clinical history:

A case of carcinoma of left breast on ayurvedic treatment. Scan done for disease status evaluation

Procedure: 6.6mCi of ¹⁸F-FDG was injected IV after overnight fasting. After a waiting period of 60 minutes, whole body FDG PET CT was performed from vertex to mid-thigh with GE discovery 600 PET/CT systems without breath holding instructions. High resolution CT scan was performed using a dedicated PET scanner with 16 slice/sec MDCT. A separate breath hold CT was performed for lung examination. Semi quantitative analysis of FDG uptake was performed by calculating SUV value corrected for dose administered and patient body weight

Fasting blood sugar: 122 mg/dl

Observations:

Head & Neck:

No suspicious lesion is seen in brain parenchyma

Normal physiological tracer distribution is noted in the supra and infra tentorial brain parenchyma.

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(Note: All brain metastases may not be apparent on a PET-CT scan and an MRI may be performed where clinically indicated).

Normal physiologic FDG uptake is seen in the ocular muscles.
Salivary glands demonstrate normal metabolic activity.
Thyroid gland appears unremarkable with no demonstrable abnormal FDG uptake.

No focal FDG uptake or suspicious lesion is noted in the nasopharynx, oropharynx, hypopharynx and larynx.

No significantly enlarged or hypermetabolic cervical lymphadenopathy is noted.

Thorax:

Mediastinal vascular structures appear unremarkable.
Normal physiological FDG uptake is seen in the myocardium.
Trachea and the main bronchi appear unremarkable.

No discrete suspicious nodules are seen in bilateral lung fields
No evidence of any pleural or pericardial effusions seen.

No significantly enlarged or hypermetabolic mediastinal lymphadenopathy is noted.

Breasts:

An ill-defined soft tissue lesion is seen in left breast parenchyma (upper outer quadrant) with no significant increased FDG uptake – 17 x 15 mm (previous – 18 x 14 mm)

No discrete suspicious satellite nodules noted
No associated skin thickening is seen

Nipple areola complex is uninvolved

No underlying chest wall involvement is seen

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Few reactive bilateral axillary nodes noted with no significant increased FDG uptake

Right breast parenchyma is unremarkable

No FDG avid or enlarged bilateral internal mammary nodes

Abdomen and pelvis:

No evidence of ascites or free fluid seen.

Stomach, small bowel and the large bowel loops appear unremarkable and reveal normal physiologic FDG uptake with no abnormal wall thickening

Liver measures within normal limits and reveals fairly homogeneous parenchyma & attenuation pattern with normal physiologic FDG uptake. Intra hepatic biliary radicles / CBD are not dilated. Portal vein is normal.

No focal increased FDG uptake or suspicious lesion is seen in liver parenchyma

Spleen measures within normal limits and reveals fairly homogeneous parenchyma & attenuation pattern with normal physiologic FDG uptake.

Gall bladder appears fairly well distended with no abnormal FDG uptake. Pancreas appears normal in size, shape & attenuation pattern with no demonstrable abnormal FDG uptake.

Bilateral adrenal glands appear unremarkable with no abnormal FDG uptake.

Kidneys, ureters and the urinary bladder are visualized as per normal clearance of the radiotracer.

Bilateral kidneys appear normal in size, shape and attenuation pattern with normal physiologic FDG uptake.

No evidence of calculus / mass lesion or hydronephrosis is noted.

Urinary bladder is well distended and appears normal in shape & outline.

No focal increased FDG uptake or suspicious lesion is seen in pelvic region

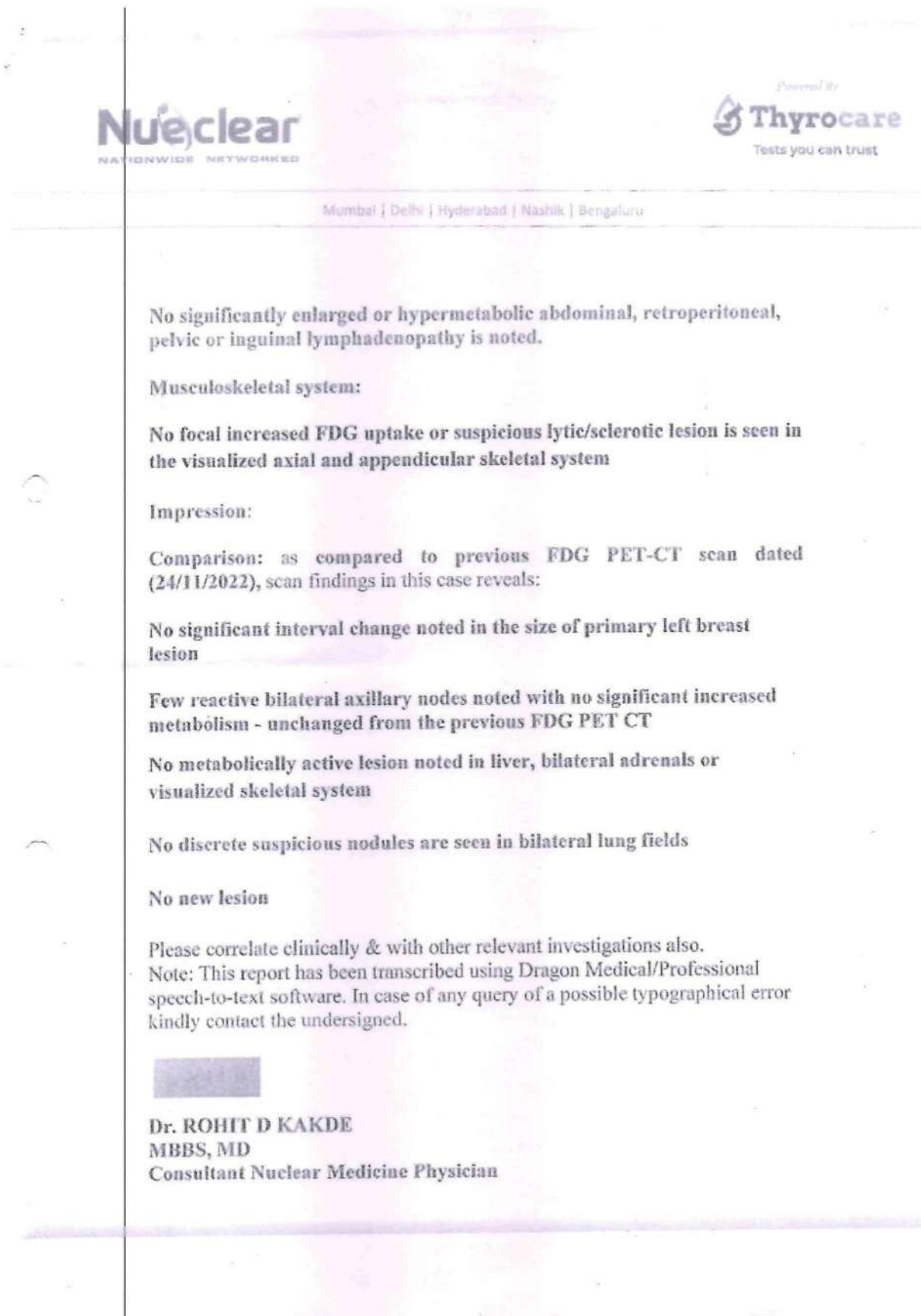


Fig 3. Whole body PET CT scan reports on December 23, 2023



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Name :	<input type="text"/>	PET No :	PET
Age/Sex :		Patient ID:	OMEGA126
Ref/Dept :	Dr. LIFE CARE LTD	Date :	23/12/23

Whole Body PET CT

HISTORY: Case of CA left breast. On alternative treatment.

INDICATION: To assess disease status.

PROTOCOL: ^{18}F -fluorodeoxyglucose was administered intravenously. To allow for distribution and uptake of radiotracer, the patient was allowed to rest quietly for 60 minutes in a shielded room. Imaging was performed on an integrated PET/CT scanner. CT images for attenuation correction and anatomic localization followed by PET images from vertex to mid thigh were obtained.

Comparison has been done with the previous PET-CT scan dated 14th April 2023.

FINDINGS:

Brain:

Visualised cerebral and cerebellar hemispheres appear normal with physiological biodistribution of FDG. The ventricular system is normal. No mass lesion or midline shift seen.

Head & Neck:

Orbits, paranasal sinuses, mastoid air cells & skull base appear normal.

No enhancing mass lesion or focal abnormal FDG uptake seen in the nasopharynx / oropharynx / hypopharynx and larynx.

Deep fascial spaces of neck (parapharyngeal, retropharyngeal, perivertebral, masticator & carotid spaces) appear normal.

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Name :		PET No :	PET
Age/Sex :	68 yrs/ female	Patient ID:	OMEGA126
Ref/Dept :	Dr. LIFE CARE LTD	Date :	23/12/23

Both lobes of thyroid appear normal in size with no focal hypodense lesion / focal abnormal FDG uptake.

Physiological FDG uptake is seen in the bilateral palatine tonsil.

Vascular structures of neck appear normal.

No significant cervical or supraclavicular lymph nodes.

Chest:

No significant FDG uptake is noted in the ill-defined soft tissue density lesion in the upper and central outer quadrant of left breast parenchyma measuring approximately 1.8 x 0.8 cm - shows significant reduction in size.

Right breast parenchyma region appears unremarkable.

Non-FDG avid bilateral axillary lymph nodes with maintained fatty hila are noted, largest measuring approximately 1.2 x 0.7 cm . Likely reactive.

No significant abnormality is detected in bilateral lung parenchyma. No evidence of soft tissue density nodules. No evidence of pleural effusion or pleural thickening on either side.


No significant metabolically active hilar or mediastinal lymph nodes seen on either side.

Esophagus appears unremarkable with no mural thickening / mass lesion.

2

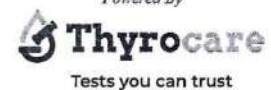
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Age/Sex :	68 yrs/ female	Patient ID:	OMEGA126
Ref/Dept :	Dr. LIFE CARE LTD	Date :	23/12/23

No focal abnormal focal FDG uptake seen in rest of the body.


Physiological tracer distribution is seen in the brain, myocardium, kidneys, ureters and urinary bladder.

IMPRESSION: As compared to previous FDG PET CT dated 14th April 2023

PET-CT STUDY SHOWS:

- Significant reduction in size of the metabolically inactive left breast parenchymal lesion.
- No significant bilateral axillary, internal mammary and supraclavicular lymph nodes.
- Right breast parenchyma appears unremarkable.
- No new lesion.

This is a professional opinion based on imaging findings and not the diagnosis. It should be correlated clinically and with other relevant investigations to arrive at a proper conclusion. Not valid for medico-legal purpose.



DR. PRIYANKA SHARMA
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CONSULTANT NUCLEAR MEDICINE
& PET/CT

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Fig 4. The FNAC report

Dr. V. S. Patkar, M.D., D.P.S.

Registered on	: 16/11/2022	17:19
Collected on	: 16/11/2022	17:15
Test Completed on	: 17/11/2022	13:04
Reported on	: 17/11/2022	17:11

FN-472/22

F.N.A.C. OF LEFT BREAST LUMP.

* One slide with report.

End of Report

Authorized Signatory

Dr. V.S. Patkar (M.D. Patil)

Collection Centre : CSD Centre : Dr. Jadhav Chawl, C-5/12, Gr. Flr. Sector 4, Beyond Shopping Centre, CBD, New Mumbai. Tel: 022-2757 6200

ACHARYA MANISH ET AL

Page 3 of 4

Name	:		Age	:	63Yr	Gender	:	Female
UHID	:	ANM1.0000849023 / ANMIP138096	W/BNo/RefNo	:	SEVENTH FLOOR H WARD/7016			
Lab No	:	AMN1.C2401006	LRN	:	2084679			
Ref Doctor	:	Dr.SANDIP BIPTI						



Collected on	:	13-MAY-2024 05:44:37 PM	Received on	:	13-MAY-2024 05:44:37 PM	Reported on	:	17-MAY-2024 12:20:20 PM
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Axillary lymph nodes: All fifteen lymph nodes are free of tumor including these sampled in FSII and FSIII (0/15).

IMPRESSION:

Focal Mucinous Carcinoma Left Breast with negative regional lymph nodes.
TNM: pT1aN0Mx (AJCC 8th edition).

* Slides and paraffin blocks of tissue processed at Apollo Hospitals, Navi Mumbai will be stored for Ten years.
Tissue specimen received at Apollo Hospitals, Navi Mumbai will be discarded four weeks after final report.

* END OF REPORT *

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