Table: Skin Cancer - Named Entity Recognition

	Named Entity	Tag	Description	Examples
1	Cancer Type	**CANC_T**	This category designates the **kind of cancer** that is discussed in the narrative. There are over 200 distinct kinds, depending on where they originate in the body. Common cancer types include: 1. Breast Cancer, 2. Lung Cancer, 3. **Skin Cancer (Melanoma)**, 4. Pancreatic Cancer, 5. Lymphoma, etc.	Examples in the text: • malignant melanoma, nodular melanoma Lentigo maligna melanoma, Desmoplastic melanoma, advanced melanoma • **liver cancer** that appeared after **melanoma** • super rare type of **sinus cancer** • lost her battle last week to **pancreatic cancer** • I survived a stage three **adrenal cortical carcinoma**, a **melanoma** and the newest one (got the diagnosis today) is a **squamous cell carcinoma**
2	Staging and grading	**STG**	Staging refers to the extent to which the cancer has grown or spread throughout the body. Stage groups for melanoma include: • **Stage 0** • **Stage 1** is divided into two subcategories, **A or B** (1a, Ia, 1A, Ib, 1B, and the like) • **Stage 2** is divided into three subcategories, **A, B, or C** (2a, IIa, IIb, iic, 2c, and the like) • **Stage 3** is divided into four subcategories, **A, B, C, or D** (IIId, IIIb, iiiB, 3a, 3d, and the like) • **Stage 4** is further categorised into four subcategories: **M1a, M1b, M1c, or M1d** • **Grade X, I, 2, 3, 4** (grade 1, gr2, grX, and the like) • **Recurrent cancer** means that it has reappeared after treatment. Grading indicates how abnormal the cancer cells and tissues appear under a microscope as compared to normal cells and tissues.	Examples in text: • Stage 1, 1a, IA, ia, Ib, 1B, and the like • Stage 2a, IIa, IIb, iic, 2c, and the like • Stage 3, IIId, IIIb, iiiB, 3a, 3d, and the like) • Stage 4, stage 4 M1a, stage M1b, stage IV m1c, iv m1d, and the like • grade 1, gr2, grade X, gr X, and the like • recurrent
3	Treatment	**TRT**	This category covers broad categories of different types of treatments, commonly referred to as therapies. The most prominent therapies for melanoma are: • Surgery • Radiation therapy • Immunotherapy • Targeted therapy • Chemotherapy	Examples in text: • immuno, chemo, radiation, gamma knife surgery, wide excision, lymph node dissection • The next **surgery** was the **head surgery**, I was completly out • The next months would be endurig **physical therapy** and **speech therapy** • This was biopsied and diagnosed as stage I melanoma, and was removed via **wide local excision** or **WLE**.
4	Result	**RES**	This identifier indicates the benefits of a treatment or medication. This includes: • shrinking of the tumor • slow rate of growth • remission, meaning the signs and symptoms of cancer have reduced	• clear margins after surgery • shrunk, shrunken, gone • stopped spreading • no further growth • clear scans and tests • reduced number of tumors
5	Investigation	**INV**	This identifier refers to **tests or investigations** that are frequently used to help diagnose cancer. The following **lab tests** can be performed to help diagnose cancer: • Blood chemistry tests • Complete blood count (CBC) • Cytogenetic analysis. • Immunophenotyping • Liquid Biopsy • Sputum cytology • Tumour marker tests • Urinalysis • Urine cytology. **Imaging tests** used for cancer: • CT scan • MRI • PET scan • Nuclear scan • Bone scan • Ultrasound • X-rays **Biopsy** investigations include: • endoscopy (colonoscopy, bronchoscopy) • sedative or anesthesia (local, regional, general)	• 6 tumours were unnoticeable in the **ct scan** • I did a **clinical trial**, and have been **NED** since • a **tumor** the size of a large egg was pushing on my right frontal lobe and it was bleeding • Last year I had a **tumour** in my groin and it spread to my lungs liver and brain. • This was **biopsied** and diagnosed as stage I melanoma, and was removed via wide local excision. • The **tumor** and **lesions** are either gone or very close to gone • New **lump** found on back in Dec • so they set a follow-up **PET scan** after I finished the steroids • **CT scan** of his hips and found a few **legions** on his hips and spine • I had a sentinel lymph node biopsy which confirmed a diagnosis of at least stage II/III melanoma, and a subsequent **PET scan/liver needle biopsy/brain MRI** confirmed a stage IV diagnosis
6	Medication	**MED**	This identifier is used to mark the drugs/medications prescribed to the patient, in relation to cancer or any other illnesses previously diagnosed. Specifically for melanoma the medications include: **BRAF inhibitors** Dabrafenib (Tafinlar), Encorafenib (Braftovi), and Vemurafenib (Zelboraf)	Examples in the text: • **fentanyl patch**, **keytruda**, **braf / mektovi pills** • pain relieve medication has been **Tylenol** • my monthly infusions of **Zometa (calcium)** • after 3 infusions of **Opdivo (nivolumab)** and 2 infusions with **Opdivo** and **Yervoy (ipilimumab)**

			MEK inhibitors Trametinib (Mekinist), cobimetinib (Cotellic), and binimetinib (Mektovi) Cobimetinib **KIT inhibitors** asatinib (Sprycel), imatinib (Gleevec), and nilotinib (Tasigna).	• immunotherapy bc of **prednizone** prescribed
7	Symptom	**SYM**	Symptoms are physical changes you can feel in your body. People with cancer may exhibit one or more of the symptoms or indications listed below: • mole or skin lesion • Unusual lump or swelling anywhere • Very heavy night sweats or fever • Fatigue • Unexplained pain or ache • Unexplained weight loss • Unexplained bleeding or bruising	Examples in the narratives: • mole • tiny bump, large mass, large bump • pain (back pain), headaches, migrane • trouble moving (arms, legs, etc.) • coughing up blood • knots • loss of appetite • numbness
8	Tumor size and shape	**SIZE**	This identifier is used to mark the shape and size of the tumors. This could be using **metric lengths like millimeters and centimeters**, or using adjectives like **tiny, small, big, huge, large,** or using objects to indicate the size like **pea, softball, etc.**	• 3mm 5 mm, 1 - 3 cm, etc. • larger than a softball • abnormal size • large mass, large bump • pea sized • a tumor the size of a **large egg** was pushing on my right frontal lobe and it was bleeding
9	Number	**NUM**	This identifier is used to quantify a certain aspect, such as the number of treatments, tumours, or therapy sessions.	• **10 rounds** of pelvic radiation • **2 small** new mets/tumors • **18 sessions** • **6 tumours** were unnoticeable in the ct scan • after **3 infusions** of Opdivo (nivolumab) and **2 infusions** with Opdivo and Yervoy (ipilimumab)
10	Duration	**DUR**	This identifier is used to mark the length of time for the following: • time for a certain treatment period • hospital stay • time following the onset of symptoms • time for a surgical procedure • gap intervals between examinations or sessions	Examples from the narratives: • surgery took **five hours** on Friday • spent **4 days** in hospital • I had this mole for **at least 5 years** • **18 months** of treatment • **3 month** follow up scan • been in the hospital **500+ days** these past **two years**
11	Part of the Body	**POB**	Melanoma can develop anywhere on the body, including the **head and neck, the skin under the fingernails, the genitals, and even the soles of the feet or palms of the hands**. This identifier is used to label certain body parts. This could include the body part where: • a symptom was detected, • where the condition persists, • the site of a treatment or surgery, or • the location of the tumour and its spread.	Examples in the narratives: • tumors in my **lymph nodes** and **liver** • mets in my **c-spine**, **l-spine**, **hip**, **liver**, **foot**, and **lungs** • nodular melanoma that has matastasized to the **liver** • the bump turned black (on his **leg**) • a tumor the size of a large egg was pushing on my **right frontal lobe** and it was bleeding
12	Adverse Effects	**ADV_EFF**	Every cancer treatment can have adverse effects or alter the body and mood. Even when given the same treatment for the same type of cancer, people do not have the same side effects. These primarily include: • side effects of medications • side effects of surgery • side effects of radiation, and the like	• hair loss, memory loss • bleeding • blood clots • seizures • swollen arms, legs, and ankles • any disease like colitis, ileitis, esophagitis, acute arthritis, vitiligo, Addison's disease, bilateral conjunctival chemosis, autoimmune hepatitis • vomiting • weight loss • eye inflammation • anaphylactic shock • skin irritation, skin infections, and fatigue
13	Etiology	**EGY**	Etiology is the study of the genesis or cause of a disease. There are several genetic and environmental variables that contribute to cancer. This includes genomic changes such as, EGFR mutations, ALK rearrangements, ROS1 rearrangements, MET and RET in lung cancer, **CDK4, MITF, PTEN, and BRAF mutations in melanoma.**	Examples in the text: • I'm starting a clinical trial for my **NRAS mutation** • *my cancer tested positive for the **BRAF mutation*** • ***BRAF* V600E** or **V600K mutation**. • but it was just as the **Omicron surge** was hitting and going to an emergency
14	Diagnosis of other diseases	**DIAG**	This category is used to mark diseases other than cancers. This includes: • Chronic illnesses other than cancer like asthma, arthritis, chronic obstructive pulmonary disease (COPD), chronic kidney disease, Heart disease, diabetes, etc. • Allergies • Coronavirus	Examples in the text: • **kidney failure** • Went to the Ortho wall in clinic, was told it was **tendonitis** and keep going to therapy • I have **svc syndrome**, by the time they tried to stent it • But before that, I got **fibromyalgia**

			• Parkinson's disease, etc.	
15	Emotion	**EMO**	A cancer diagnosis can have an emotional and social impact on patients or carers. Managing stress or addressing a range of emotions, such as **grief, worry, frustration, fear, happiness, hopefulness, gratefulness, or rage,** may fall under this category. This identifier helps to pinpoint the feeling that the patient or carer has made clear in the post.	• scary, scared, fear • worried, feeling down, numb,guilty • sad, sadness, angry • hope, hopeful, grateful, relieved • freaking, freaking out • confident • Feeling immensely **relieved** and phenomenally **grateful** for the treatment
16	Mental Health Diagnosis	**MHD**	Stressful situations can lead to a major mental health condition in patients and caretakers, in addition to a wide range of emotions. The psychological effects of a cancer diagnosis can be profound. It is intended to draw attention to the patient's or caregiver's mental health status. This mainly includes **depression, anxiety, PTSD, etc.,** for which patients or carers seek professional assistance or even medications.	• emotional breakdown, emotionally numb • panic attacks • shaky • anxiety attacks • clinical depression • depressive state • depression • suicidal thoughts, thoughts of hurting oneself • post-traumatic stress disorder (PTSD)
17	Metaphor	**MET**	This identifier is used to mark the metaphorical terms used specifically to describe the cancer or cancer experience in the text.	Examples in the text: • **aggressive cancer** • **obnoxious melanoma** • My original **cancer was a freaky** • **lost her battle** last week to pancreatic cancer • I know Melanoma has a tendency to be **stubborn** and likes to reoccur and if that happens, well, I'll kick its butt again and again if I have to
18	Metaphorical expressions	**EXP**	An expanded category called "metaphorical expressions" is used to identify words or statements that patients or caregivers use to describe their experiences. This tag can also be used to indicate metaphorical statements (sentences) made to other cancer survivors or about any other element of life.	Examples in the text: • Remember that all cancer is bad, there is no "good" cancer. • Thanks, everyone, for your responses! Now let's share that energy with all our fellow travelers here! • Just because a patient doesn't go through harsh treatment doesn't mean they have a "better" disease • I know Melanoma has a **tendency to be stubborn and likes to reoccu**r and if that happens, well, **I'll kick its butt again and again if I have to.**
19	People (Cancer care team)	**PPL**	In cancer care, different types of health care professionals often work together to create a patient's overall treatment plan that combines different types of treatments. This is called a multidisciplinary team. Cancer care teams include other important **health care professionals, including doctors, physician assistants, nurse practitioners, oncology nurses, social workers, pharmacists, counsellors, dietitians, physical therapists, occupational therapists, and others**. People with melanoma may work with doctors in different specialties. These include: • Dermatologist, • Medical oncologist, • Radiation oncologist, • Surgical oncologist • Pathologist • Dermatopathologist • Radiologist	Examples in the text: • Waiting for the full report from the radiologists, but my **oncologists** are confident there is nothing but good news here • Thursday I did several scans and had physical checks by **plastic surgeons**. • we're very thankful for the countless **researchers, oncologists, nurses,** friends, and family that have been supportive over the last two years • Will know more when I see the **neurologist** next Wednesday • I once again went to my second opinion a **specialist** and they stated that immuno can work for both cancers • I finally went to see my **PCP** about some depression issues and I'm just really glad I did
20	Organization	**ORG**	This category is used to identify hospitals, specific hospital wards or units (emergency, oncology, etc.), nursing homes, pharmaceutical brands or firms, healthcare institutions or agencies, and so on.	• local cancer center • hospice, hospice care • oncology ward • emergency units: A&E, ED, ER, and EW • support groups • ICU, neuro ICU • Beth Israel Deaconess Medical Center • Obama care, and the like.
21	Geopolitical entity	**GPE**	Entities having a governing body, such as nations and cities, are considered geopolitical. "United Kingdom," "Canada," "London, etc.	UK, U.K, U.K., USA, etc.
22	Age	**AGE**	Indicates the **age of the patient** in the narrative. It should be explicitly mentioned and not confused with the caretakers' age.	• **45 years old**, **45-years-old**: please tag the entire expression as AGE • I am **33**: please tag 33 as AGE. • in my **30's**: please tag 30's as AGE. • in my **20s**: please tag 20s as AGE.
23	Gender	**GENDER**	Indicates the **gender of the patient** in the narrative. It should be explicitly mentioned as **male or female** and not confused with the caretakers' gender.	• 45 years old **male**: please tag male with the GENDER tag.
24	Age/Gender	**A/G**	Some posts contain age and gender information in the format	33M, (32F), 26/M, 28/F, 33f, 44m, 66-F, and the like.

			Age/Gender, AgeGender, or Age-Gender. These should be tagged using the **A/G identifier**.	

GENERIC RULES:

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1) **Consistency:** Similar expressions must be annotated with the same label throughout the entire document.
2) **Precision:** Annotate effectively by selecting expressions that are highly related to the label and avoid overly general terms.
3) **No overlap:** Avoid entity overlap unless stated otherwise (nested entities are not permissible).
4) Punctuation Exclusion: Avoid including punctuation marks in the named entity provided they are part of the expression.
5) **Complete Coverage:** Ensure that all designated categories are included in the narrative, where applicable.
6) **Reddit Slangs:** Reddit frequently accepts abbreviations such as "33M" or "33/F", which represent a user's age and gender. These shorthand expressions must be identified as unique entities.
7) **Medical Abbreviations:** Medical abbreviations like "WLE" for "Wide Local Excision" should be annotated consistently and not overlooked.
