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Underwriting Approach to Non Hodgkin's Lymphoma

Introduction

Non Hodgkin's Lymphoma is a cancer that originates in the lymphatic system. The lymphatic system is part of the disease-fighting network throughout the human body. In Non-Hodgkin's lymphoma tumors develop from the white blood cells (lymphocytes) these tumors can occur at different location in the body. Actually there are more than 30 types of Non Hodgkin's lymphoma.

Non-Hodgkin's lymphoma is more than seven times as common as the other general types of lymphoma. Non Hodgkin's lymphoma has been one of the most rapidly increasing types of cancer in the United States have more than doubled in incidence since the 1970s.

Low-grade lymphomas are often described using the term indolent as the progress slowly over a long period of time. However low grade lymphomas are resistant to treatment and indeed may be classified as not curable. Intermediate and high-grade lymphomas on the other hand are more aggressive with a high early mortality but a substantial portion of the initial survivors is cured by treatment. For insurance risk classification intermediate and high grades are grouped together as clinically aggressive NHL. Thus carriers will not offer for over 10 to 15 years on low-grade Stage 1 Non Hodgkin's Lymphoma but will offer after 3 to 5 years.

Causes

Normally White Blood Cells or Lymphocytes go through a predictable life cycle. Old Lymphocytes die and the body produces new ones to replace them. But in non Hodgkin's lymphoma the body produces abnormal lymphocytes that continue to divide and grow uncontrollably. This oversupply of lymphocytes crowds into the lymph nodes and causes them to swell. While researchers don't know exactly what causes non Hodgkin's lymphoma they suspect that activation of certain abnormal genes may be involved.

The lymphocytes exist as either B Cells or T Cells. B cells fight infection by producing plasma cells, which in turn produce antibodies that neutralize foreign invaders. T cells are involved in killing foreign invaders directly. About 85% on the non Hodgkin's Lymphomas occur in B cells with the remainder in T cells.

Non Hodgkin's Lymphoma generally involves the presence of cancer cells in the lymph nodes. But the disease can spread to other parts of the lymphatic system. This includes the lymphatic vessels, tonsils adenoids spleen thymus and bone marrow.

While non Hodgkin's lymphomas can occur at any age it is most common in people in their 60 s. Those that have had organ transplants are more susceptible because of immunosuppressive therapy has impaired immune mechanisms.

Screening and diagnosis

Imaging techniques such as positron emission tomography (PET) scanning are used to detect cancers. For this test a small amt of radioactive tracer is injected into the body. The tissues of the body then absorb the tracer. Tumors are typically more metabolically active than the other tissues so they absorb more of the tracer. A lymph node biopsy may reveal non Hodgkin's lymphoma and if so which type. This procedure may show the lymphoma to be growing slowly (low grade) or growing at a moderate rate or rapidly. The Bone marrow biopsy is used to find out if the disease has spread.

There are about 30 types of non Hodgkin's lymphoma. Doctors also assign a stage (I through IV) to the disease based on the number of tumors and how widely the tumors have spread.

Treatment

Several factors affect the choice of treatment including the type and stage of the lymphoma, age and overall medical condition. The main treatment options include:

Chemotherapy, Doctors use a combination of drugs to fight against fast growing cancer cells. This treatment is used for intermediate and high-grade lymphomas. Single drug might be given in low-grade type of the disease

Radiation whereby high doses of radiation are given to shrink tumors. This treatment is given for early stages of low-grade lymphomas. Occasionally it is used along with chemotherapy on intermediate grade tumors.

Stem Cell transplantation. Lymphomas tend to be sensitive to chemotherapy. However if the lymphoma recurs high doses of chemo are needed to treat the disease. The amt of chemotherapy that can be given is limited because of the damage chemotherapy does to the bone marrow. In order to avoid this side effect healthy stem cells are taken from the blood or bone marrow and frozen. After the person undergoes very high doses of chemotherapy to kill the lymphoma the healthy stem cells are thawed and injected back into the body. Again this treatment is used to treat intermediate and high-grade lymphomas that relapse after the initial treatment.

Observation is sometimes used with the slow growing lymphomas Slowly growing lymphomas with few symptoms may not require treatment for a year or more from a clinical perspective. Obviously these are not insurable from an underwriting perspective. Biologic therapy. At this point Ritucimab (Rituxan) is the only form of stands alone biologic therapy approved by the Food and Drug Administration for the treatment of B cell non Hodgkin's lymphoma. It is sometimes given in tandem with radio immunotherapy.

Radio immunotherapy is the newest form of treatment for non Hodgkin's lymphoma. Two radio immunotherapy drugs have received FDA approval. It uses monoclonal antibodies combined with radioactive isotopes. The FDA has approved their use only after other

treatments have failed because of the potential serious side effects such as hemorrhage and life threatening infections.

Underwriting Approach to Non Hodgkin's Lymphoma

Traditionally underwriting cancer follows the same approach to cancer as the clinical management of cancer, that is the earlier a cancer is detected and treated the better the prognosis. With Non Hodgkin's Lymphoma the approach is somewhat the opposite. Because the low grade lymphomas are indolent it is harder to know if all of the cancer has been gotten with the initial treatment companies are postponing consideration of these for a longer period of time. No company at this time is being aggressive. Swiss Re notes that the mortality pattern of most non-Hodgkin's lymphoma is unusual in that the indolent low grade subtypes tend to have a worse long term prognosis when compared to the more aggressive intermediate and high grade subtypes. The indolent lymphomas tend to follow a slowly progressive course. Generally 75 to 85% of cases will present with advanced stage and respond poorly to conventional therapy. They are usually incurable. The high-grade lymphomas are quite aggressive and have very high short term mortality. However a higher percentage (50%) of the high grade lymphomas with present with localized disease and respond much better to chemotherapy. About 1/3rd of individuals diagnosed with high-grade non Hodgkin's lymphoma will achieve long-term remission and possible cure.

Non-Hodgkin's lymphoma is a disease that primarily affects the elderly. Median age of NHL is 65 and incidence does increase with age.

In order for carriers to properly assess the disease they need to review complete pathology reports for all lymph node and other tissue biopsy which includes the cell types histological patterns and classification of lymphoma type along with full staging data treatment details and results of all follow up examinations and details of other medical impairments or complications resulting from the lymphoma treatment.

Underwriting Ratings

Currently Swiss Re (who is the primary re insurer of several ABC companies) is declining all Low grade (stage 1 and 2) Non Hodgkin's lymphomas if the initial treatment was completed at age 60 or less. They will consider those over age 61 at Table 8 after more than 3 years. With Stages 3 and 4 diseases they are looking at a permanent Table 2 plus 15/m after 5 years. In some cases they might offer Table 2 plus 20/m after 3 years. With regard to recurrences after initial treatment all of those will be at best a referral to Medical Director.

Conclusion

Non Hodgkin's lymphoma is one of the few cancers that do not follow the traditional underwriting approach to cancer. Indeed it is almost the opposite of what would be expected.

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