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Obesity is a medical condition in which excess body fat has accumulated to an extent that it may have a negative effect on health.Obesity is most commonly caused by a combination of excessive food intake , lack of physical activity, and genetic reasons. A few cases are caused primarily by genes,hormones, medication, or mental disorders.

\* Obesity means having excess body fat. Adults 35 years of age and older with a BMI greater than 30 are obese.

\* Obesity is not just a cosmetic consideration. It is a chronic medical disease that can lead to diabetes, high blood pressure, obesity associated cardiovascular disease such as heart disease, gallstones, and other chronic illnesses.

\* Obesity is a risk factor for a number of cancers.

\* Obesity is difficult to treat and has a high relapse rate. Most people who lose weight regain the weight within five years.

\* Even though medications and diets can help, the treatment of obesity cannot be a short-term "fix" but has to be a lifelong commitment to proper diet habits, increased physical activity, and regular exercise.

\* The goal of treatment should be to achieve and maintain a "healthier weight," not necessarily an ideal weight.

\* Even a modest weight loss of 5%-10% of initial weight and the long-term maintenance of that weight loss can bring significant health benefits by lowering blood pressure and lowering the risks of diabetes and heart disease.

\* The chances of long-term successful weight loss are enhanced if the doctor works with a team of professionals, including dietitians, psychologists

2. These 2 drugs, Belviq and Qsymia, have added new tools for the treatment of obesity. In addition to reducing body mass index, these drugs have been shown to reduce hemoglobin A1c levels in patients with diabetes and blood pressure levels in patients with hypertension, as well as to decrease lipid levels in patients with hyperlipidemia. Their common side effects, and the benefits these new drugs can provide toward the management of the obesity epidemic that are different from other medications currently available. Lifestyle modification is the first and mainstay treatment for obesity. Antiobesity drugs are indicated as adjuncts to a healthy, low-fat, low-calorie diet and an exercise plan.

\* Congenital heart disease (CHD) is the most common anatomical malformation occurring live‐born infants and an increasing cause of morbidity and mortality across the lifespan and throughout the world. Population‐based observations have long described associations between maternal cardiometabolic disorders and the risk of CHD in the offspring The epidemic of obesity is also affecting children with congenital heart disease (CHD). More than one quarter of this population is already overweight. Two main causes have been described: physical activity restrictions and interventions for weight gain in infancy, when many lesions cause undernutrition. These interventions often include consumption of increased calories and foods with high fat and sodium content

3 Etiology of cancer

The etiology of cancer risk includes the presence of chronic infection (especially in the urinary tract), a depressed immune system, previous treatment with immunosuppressive drugs or cytotoxic drugs, nutritional deficiencies , and altered deoxyribonucleic acid (DNA) repair mechanisms. Importantly, cancer is not related to dialysis modality, but rather the uremic state. Uremia is associated with impaired T. cell immunity and a state of chronic inflammation , which lead to DNA mutations in proliferating cells and deregulatory release of cytokines implicated in cancer development and progression. CKD also leads to the accumulation of carcinogenic compounds to which dialysis patients are exposed from the environment and possibly in the dialysate. Increasing the frequency of dialysis has been associated with reduced genomic damage and plasma urea concentrations in patients with ESKD. Excess cancer risk may also be due to an interaction of immune dysfunction induced by uremia with established risk factors (ultraviolet [UV] radiation, tobacco, alcohol).Several reports have also demonstrated high levels of cumulative radiation dose in patients with ESKD on dialysis.Although there have been no follow-up studies that have measured cumulative radiation doses and cancer outcomes in patients with ESKD, high exposure (cumulative effective dose >50 mSv) has been reported to increase cancer mortality by 5% in other populations.

In addition to the persistent metabolic changes associated with ESKD, the underlying causative disease, and the development of certain complications of ESKD may also predispose to cancer. The risk of renal cell cancer (RCC) is increased in patients with acquired cystic disease and seems to be related to the total duration of CKD, rather than the duration of dialysis.

The increased risk of some cancer types is rapidly reversed when immunosuppression is reduced or withdrawn after kidney transplant failure. These cancer types include Kaposi’s sarcoma, non-Hodgkin, lymphomas , melanoma, and squamous cell carcinomas of the lip. However, the risk of cancer at other sites remains significantly elevated after iatrogenic immunosuppression is ceased. These cancer types include leukemia, lung cancer, and cancers related to ESKD.

The frequency of viral infections in dialysis patients is poorly documented, but there is no doubt that patients with ESKD have a greater than normal exposure to hepatitis B and hepatitis C virus, and this probably accounts for the observed excess of liver cancer. Human papillomarous virus (HPV) is associated with cancers of the tongue, cervix, vagina, vulva, and penis.HIV is also associated with increased risk of Kaposi’s sarcoma, non-Hodgkin’s lymphoma, and Hodgkin’s lymphoma, lip, and cervical cancers.In both dialysis patients and transplant recipients, the increased risk of lymphoma is thought likely to be due to activation of dormant Epstein Barr virus.