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The license may not give you all of the permissions necessary for your intended use. For example, other rights such as publicity, privacy, or moral rights may limit how you use the material. Germ cell cancer can develop in children and adults. Researchers dont know exactly what causes germ cell cancers to form, but they have identified some risk factors.Germ cell tumors are abnormal growths that form in the cells that become eggs or sperm. Roughly 20% are cancerous, and the remainders are noncancerous.Most germ cell cancers form in the testicles or ovaries, but they can develop almost anywhere in your body.Germ cell cancers can develop in children or adults. Theyre estimated to make up 3% of childhood cancers and about 15% of cancers diagnosed during adolescence.In this article, we take a deeper look at germ cell cancers, including whos at risk, how they develop, and how theyre treated.Share on PinterestCommon locations of germ cell tumors in children and adults. Illustration by Antonio JimenezGerm cell cancer develops in cells that become eggs or sperm. It usually develops in your ovaries or testes, but it can also develop in other places. According to the National Cancer Institute, it can occur almost everywhere.Studies from Northern Europe estimate that testicular germ cell tumors occur in 80 to 100 men per million. Its the most common cancer in men between puberty and age 40.Ovarian germ cell cancer makes up about 15% to 20% of ovarian cancers overall and about 75% of cancerous ovarian tumors in children. In a 2019 study, researchers estimated the number of cases in North America from 2008 to 2012 as:When germ cell cancer develops outside your ovaries or testicles, its known as extragonadal germ cell cancer. In adults, extragonadal germ cell cancer only makes up about 4% of germ cell cancers. It makes up almost half of germ cell cancers in children.Its not clear why extragonadal cancers develop, but its thought to do with how germ cells develop before birth. When a fetus grows in the womb, cells that produce eggs or sperm usually move to the testes or ovaries. Sometimes, though, they settle in other body parts. The most common places they settle are:at the base of the spinebrainchestabdomenSome of the more common types of germ cell cancers include:Teratomas: Teratomas are tumors that can be cancerous. They most often develop in your tailbone or reproductive organs.Germinomas: Germinomas are referred to as dysgerminomas when they occur in your ovaries and seminomas if they develop in your testicles. Germ cell cancers that develop in the testicles are usually classified as seminomas or nonseminomas.Yolk sac tumor: Yolk sac tumors most often develop in the reproductive organs or tailbone. Theyre the most common testicular cancer in children.Choriocarcinoma: Choriocarcinoma is a cancerous tumor that usually forms in the placenta and can affect the fetus and mother. It tends to grow rapidly and is very rare.Embryonal carcinoma: Embryonal carcinoma usually forms in the testicles of adolescent males. About 40% of testicular tumors have features of this cancer, but only 3% to 4% are pure embryonal carcinoma.Researchers dont know exactly why germ cell cancers form, but they have identified some conditions that seem to increase the odds of developing them:Klinefelter syndrome: Klinefelter syndrome is when a person assigned male at birth has an extra X chromosome.Androgen insensitivity syndrome: This condition develops when a person who assigned male at birth is insensitive to male hormones.Turner syndrome: Turner syndrome is when a girl is born missing an X chromosome.Cryptorchidism: Cryptorchidism is when a male child is born with an undescended testicle.People assigned male at birth are at a higher risk of developing germ cell tumors overall. However, in children, those assigned female at birth develop germ cell tumors about 25% more often.Testicular germ cell tumors most often occur before the age of 4 or in adolescence to young adulthood. Other risk factors for testicular germ cell tumors include:small testicular volumefamily historyinfertilityOvarian germ cell tumors most commonly occur in adolescent girls or young women.Doctors start the diagnostic process by performing a physical exam and considering your medical history.Imaging can be used to locate a tumor. Your doctor may order:Blood tests often reveal tumor markers called alpha-fetoprotein and human chorionic gonadotrophin that are suggestive of germ cell cancer.Doctors can confirm a diagnosis by taking a small tissue sample called a biopsy so that the cells can be analyzed in a lab. Sometimes, the cancer can be diagnosed without a biopsy with the results of imaging and blood tests alone.The best treatment for germ cell cancer depends on factors such as:how advanced the cancer iswhere the cancer is locatedyour overall healthyour agesurgeryradiation therapychemotherapyHigh-dose chemotherapy with stem cell transplant is being investigated in clinical trials.Five types of standard treatments are used to treat testicular cancer:Treatment options for people with ovarian germ cell cancer includes:surgerychemotherapyradiation therapyhigh-dose chemotherapy with bone marrow transplantsurgeryobservationchemotherapyClinical trials are examining:targeted therapyradiation therapyhigh dose chemotherapy with stem cell transplantYour outlook if you have germ cell cancer depends on the specific type of cancer you have and where its located. Many types have high chances of survival.Someones outlook is generally better for germ cell cancer found in their testicles or ovaries than in other places. Reproductive function is usually preserved when only one ovary or testicle is removed.The 5-year survival rate for ovarian germ cell cancer is about 95% for stage 1 and 83% for stage 2 to 5.The 10-year cancer-specific survival rate for stage 1 testicular germ cell cancer is about 99.7%. This means that only 3 out of 1,000 people die from factors related to the cancer within 10 years.The 5-year survival rate for testicular germ cell cancer that has spread to other body parts is around 48% to 64% for people in the highest-risk group.For children under 15, the 5-year survival rate for ovarian and testicular germ cells is about 90%. Its about 93% for teens ages 15 to 19.A small number of children develop long-term side effects from treatment that may develop years later. These side effects include kidney problems, lung problems, and hearing loss.Germ cell cancer starts in the cells that become sperm or eggs. They can develop in almost any part of your body if these cells spread while youre still developing in the womb.Your outlook with germ cell cancer depends on which type of cancer you have. Many types have high survival rates and can be managed with treatments such as chemotherapy, surgery, or radiation therapy.Healthline has strict sourcing guidelines and relies on peer-reviewed studies, academic research institutions, and medical journals and associations. We only use quality, credible sources to ensure content accuracy and integrity. You can learn more about how we ensure our content is accurate and current by reading our editorial policy.Beyer J, et al. (2021). Swiss germ-cell cancer consensus recommendations. extracranial germ cell tumors treatment (PDQ)Patient Version. (2021). KP, et al. (2018). 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Germ cell tumors survival rate in young patients. germ cell tumors treatment (PDQ) Patient version. (2022). JL, et al. (2018). Pediatric germ cell tumors: A developmental perspective. LR, et al. (2022). Cancer statistics, 2022. Z, et al. (2022). Nomograms to predict the prognosis in malignant ovarian germ cell tumors: A large cohort study. therapy to treat cancer. (2022). s study of testicular germ cell cancer. (n.d.). cancer treatment (PDQ)Patient version. (2021). is testicular cancer? (2018). symptoms of a germ cell tumor depend on factors like the tumors size and location in your body.Ovarian germ cell tumorsOvarian germ cell tumors dont always cause symptoms. For instance, mature teratomas may not cause symptoms until theyve grown large enough to create pressure in your abdomen. Often, theyre discovered on an ultrasound to determine whats causing pelvic pain.Symptoms may include:Pelvic discomfort or pain.Painful mass in your ovary.Swollen belly (abdomen).Abdominal pain (similar to appendicitis).Irregular vaginal bleeding.Nausea.Testicular germ cell tumorsThe symptoms of testicular germ cell tumors are the same as those of testicular cancer.Symptoms include:Solid, firm lump in a testicle that grows bigger (with or without pain).Pain or heaviness in your scrotum.Abdominal pain or groin pain.Oddly shaped testicle.Back pain.Extragonadal germ cell tumorsA mass on your childs tailbone or in the center of their chest may signify a teratoma. Other symptoms of an extragonadal germ cell tumor depend on the tumors location.Trouble breathing (lungs).Weakness in legs (low back).Trouble peeing and pooping (pelvis).Swelling and acute or dull pain in your childs belly.Some germ cell tumors secrete reproductive hormones that may cause symptoms of early puberty or atypical sexual development in children. Females may develop breasts, grow pubic hair and get their periods early. Males may grow breasts (gynecomastia).What causes a germ cell tumor?Normal germ cells form in a developing human embryo. These cells eventually travel to the embryos ovaries or testicles, becoming egg cells or sperm cells.In contrast, germ cell tumors consist of cells that dont develop into fully formed eggs or sperm. The germ cells divide abnormally and become a tumor in your ovaries or testicles instead. In the case of extragonadal tumors, the germ cells travel to odd places in your body like your chest, brain, belly, low back and tailbone to form tumors.Researchers arent sure what causes germ cells to develop this way.What are the risk factors associated with germ cell tumors?You may be more likely to get a germ cell tumor if you have a family history of germ cell tumors or a history of certain conditions.These include:Untreated, undescended testicles (cryptorchidism).Turner syndrome.Klinefelter syndrome.The symptoms of a germ cell tumor depend on factors like the tumors size and location in your body.Ovarian germ cell tumorsOvarian germ cell tumors dont always cause symptoms. For instance, mature teratomas may not cause symptoms until theyve grown large enough to create pressure in your abdomen. 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The French Revolutionary Wars began a decade later and Hinuber served in the Flanders Campaign. When Hanover was invaded in 1803, Hinuber offered his services to the British Army and was given command of the 3rd Line Battalion of the KGL before commanding a brigade in the Bay of Naples in 1809. He was promoted to major-general in 1811 and given command of a brigade in Lord Wellington's Peninsular War army in 1813. Hinuber commanded his brigade at the Battle of Nivelle in 1813 and then at the siege of Bayonne the following year, when he led the response to the French counter-attack. He joined the army of the new Kingdom of Hanover in 1816. He received his last command in 1831, of the 2nd Division of a corps of the German Federal Army, and died in Frankfurt two years later. (Fullarticle...)Recently featured: Hurricane Claudette (2003)Trinity (nuclear test)ManitobaArchiveBy emailMore featured articlesAboutGlds Perla Viggsdttir... that Glds Perla Viggsdttir (pictured) scored two goals for the Iceland women's national football team the day before she graduated from university?... that the literary heritage of Nova Scotia includes the first newspaper and the first literary journal in Canada?... that according to the Zoo Miami communications director, 100 men could beat a single gorilla if they "envelop the gorilla and create a human straightjacket"?... that the memorial for James Bunbury White, the founder of Whiteville, North Carolina, was knocked down in a car crash 200 years after his death?... that before the establishment of Singapore's Rail Test Centre, the bulk of rolling-stock testing had to be conducted overseas?... that the artist Cady Noland has disavowed artworks that she no longer considered genuine because they were damaged or altered?... that Christ Church, Amherstburg, a Canadian church built by a Loyalist, features timbers fashioned after a ship's hull?... that Li Jinhua was the first female spokesperson of the Chinese Ministry of Foreign Affairs?... that an announcer damaged the tower of an Arkansas radio station while driving a moving van?ArchiveStart a new articleNominate an articleMuhammadu BuhariFormer president of Nigeria Muhammadu Buhari (pictured) dies at the age of 82.Clashes between Druze militias and the Syrian Armed Forces result in hundreds of deaths.The International Criminal Court issues arrest warrants for Taliban leaders Hibatullah Akhundzada and Abdul Hakim Haqqani over their alleged persecution of women in Afghanistan.Flooding in Central Texas, United States, leaves at least 140 people dead.Ongoing: Gaza warRussian invasion of UkrainetimelineSudanese civil wartimelineRecent deaths: Felix BaumgartnerFauja SinghBradley John MurdochFrank BarrieIhor PokladGlen MichaelNominate an articleJuly 18Nadia Comneci on the balance beam1290 King EdwardI issued an edict to expel all Jews from England.1723 Johann Sebastian Bach directed the first performance of his cantata Erforsche mich, Gott, und erfahre mein Herz in Leipzig.1976 At the Olympic Games in Montreal, Nadia Comneci (pictured) became the first person to score a perfect10 in a modern Olympics gymnastics event.1989 American actress Rebecca Schaeffer was shot and killed by Robert John Bardo, eventually prompting the passage of anti-stalking laws in California.1995 Selena's album Dreaming of You, instrumental in popularizing Tejano music, was released posthumously.Benito Jurez (d.1872)Richard Branson (b.1950)M.I.A. (b.1975)Amy Gillett (d.2005)More anniversaries: July 17July 18July 19ArchiveBy emailList of days of the yearAboutPainted batThere are 30 extant kerivouline species, which are members of Kerivoulinae, one of the four subfamilies of Vespertilionidae, itself one of twenty families of bats in the mammalian order Chiroptera, and part of the microbat suborder. Kerivoulines, or woolly bats, are found in Africa and Asia, primarily in forests and caves, though some species can also be found in grasslands, savannas, or wetlands. They range in size from the least woolly bat, at 2cm (1in) plus a 2cm (1in) tail, to the Kachin woolly bat, at 6cm (2in) plus a 7cm (3in) tail. The 30 extant species of Kerivoulinae are divided between two genera, with 26 species in Kerivoula and the remaining four in Phoniscus. (Fulllist...)Recently featured: Accolades received by Inception1956 Summer Olympics medal tableMunicipalities in Prince Edward IslandArchiveMore featured listsThe Basilica of StPaul is a Catholic parish church in Rabat, Malta, located on the edge of the site of the Roman city of Melite. The present church was built between 1653 and 1658, replacing a church that was completed in 1578. It was constructed with funds from the noblewoman Cosmana Navarra, on plans prepared by Francesco Buonamici. The final stages were completed by Lorenzo Gaf. It was elevated to the status of a minor basilica in 2020. The church features a grotto where, according to tradition, Paul the Apostle lived and preached during his three-month stay in Malta in AD60. This photograph shows the facade of the Basilica of StPaul in 2021.Photograph credit: Diego DelsoRecently featured: Clouded ApolloAnne of ClevesRosencrantz and GuildensternArchiveMore featured picturesCommunity portal The central hub for editors, with resources, links, tasks, and announcements.Village pump Forum for discussions about Wikipedia itself, including policies and technical issues.Site news Sources of news about Wikipedia and the broader Wikimedia movement.Teahouse Ask basic questions about using or editing Wikipedia.Help desk Ask questions about using or editing Wikipedia.Reference desk Ask research questions about encyclopedic topics.Content portals A unique way to navigate the encyclopedia.Wikipedia is written by volunteer editors and hosted by the Wikimedia Foundation, a non-profit organization that also hosts a range of other volunteer projects: CommonsFree media repository MediaWikiWiki software development Meta-WikiWikimedia project coordination WikibooksFree textbooks and manuals WikidataFree knowledge base WikinewsFree-content news WikiquoteCollection of quotations WikisourceFree-content library WikispeciesDirectory of species WikiversityFree learning tools WikivoyageFree travel guide WiktionaryDictionary and thesaurusThis Wikipedia is written in English. Many other Wikipedias are available; some of the largest are listed below. 1,000,000+ articles DeutschEspaolFranaisItalianoNederlandsPolskiPortugusSvenskaTing Vit 250,000+ articles Bahasa IndonesiaBahasa MelayuBn-lm-gCataletinaDanskEestiEsperantoEuskaraMagyarNorsk bokmlRomnSimple EnglishSloveninaSrpskiSrpskohrvatskiSuomiTrkeOzbekcha 50,000+ articles AsturianuAzrbaycancaBosanskiFryskGaeilgeGalegoHrvatskiKurdLatvieuLietuviNorsk nynorskShqipSloveninaRetrieved from " 2This article needs additional citations for verification. Please help improve this article by adding citations to reliable sources. Unsourced material may be challenged and removed.Find sources:"1290"news newspapers books scholar JSTOR (August 2017) (Learn how and when to remove this message)Calendar yearYearsMillennium2ndmillenniumCenturies12thcentury13thcentury 14thcenturyDecades1270s1280s1290s 1300s1310sYears1287128812891290 129112921293vte1290 by topicLeadersPolitical entitiesState leadersReligious leadersBirth and death categoriesBirths DeathsEstablishments and disestablishments categoriesEstablishments DisestablishmentsArt and literature1290 in poetryvte1290 in various calendarsGregorian calendar1290MCCXCAb urbe condita2043Armenian calendar739 Assyrian calendar6040Balinese saka calendar12111212Bengali calendar696697Berber calendar2240English Regnal year18Edw.119Edw.1Buddhist calendar1834Burmese calendar652Byzantine calendar67986799Chinese calendar (EarthOx)3987 or 3780to (MetalTiger)3988 or 3781Coptic calendar10061007Discordian calendar2456Ethiopian calendar12821283Hebrew calendar50505051Hindu calendars- Vikram Samvat13461347- Shaka Samvat12111212- Kali Yuga43904391Holocene calendar11290Igbo calendar290291Iranian calendar668669Islamic calendar688689Japanese calendarSh 3()Javanese calendar12001201Julian calendar1290MCCXCKorean calendar3623Minguo calendar622 before ROC622Nanakshahi calendar178Thai solar calendar18321833Tibetan calendar(female Earth-Ox)1416 or 1035 or 263to(male Iron-Tiger)1417 or 1036 or 264 King Andrew III (r. 12901301)Year 1290 (MCCXC) was a common year starting on Sunday of the Julian calendar.July 10 King Ladislaus IV of Hungary ("the Cuman") is assassinated at the castle of Krsszeg (modern Romania). He is succeeded by Andrew III ("the Venetian"), after an election by Hungarian nobles, who is crowned by Archbishop Lodomer as new ruler of Hungary and Croatia in Szkesfehrvr on July 23.[1][2]December 18 King Magnus III of Sweden ("Birgersson") dies after a 15-year reign. He is succeeded by his 10-year-old son Birger ("Magnusson"). Although, Sweden is an elective monarchy, Birger had already been appointed heir to the throne in 1284.July 18 Edict of Expulsion: King Edward I of England ("Longshanks") orders all Jews (at this time probably numbering around 2,000) to leave the country by November 1 (All Saints' Day[3]). The edict was decreed on Tisha B'Av on the Hebrew calendar, a day that commemorates many calamities. They are eventually allowed back in 1656.September The 7-year-old Margaret, Maid of Norway, queen-designate and heir to the crown of Scotland, dies en route to the British Isles in Orkney, leading to thirteen competitors for the crown of Scotland, a succession crisis.November 28 Eleanor of Castile, wife of Edward I, dies while traveling in the North. She has been suffering from illness for some time, and the cold and dampness of the winter months probably aggravate her condition.December Edward I travels with the body of Queen Eleanor from Lincoln to London. Remembering his wife, Edward erects a series of crosses at each location that the body rests overnight. These are known as the twelve Eleanor crosses.Winter The second of the Statutes of Mortmain passed during the reign of Edward I prevents land from passing into the possession of the Church.Quia Emptores, a statute passed by Edward I, puts an end to the practice of subinfeudations. The statute allows land to be sold according to royal approval, as long as the new owner answers directly to his lord or the king.June Genoa concludes a new commercial treaty with the Mamluks; five galleys sent by King James II of Aragon ("the Just") join the Venetian Crusader fleet (some 20 ships) on its way to Acre. On board the fleet are Italian urban militias and mercenary forces under Seneschal Jean I de Grailly, who have fought for the Papal States in the so-called Italian Crusades.[4]August Italian Crusaders massacre Muslim merchants and peasants, and some local Christians in Acre. Some claim it began at a drunken party others that a European husband found his wife making love to a Muslim. The barons and local knights try to rescue a few Muslims and take them to the safety of the castle, while some ringleaders are arrested.[5]August 30 Survivors and relatives of the massacre at Acre take bloodstained clothing to Sultan Qalawun ("the Victorious") in Cairo, who demands that the leaders of the riot be handed over for trial, but the nobles refuse to send them and Qalawun now obtains legal clearance from the religious authorities in Cairo to break the truce with Crusader states.[6]October Qalawun orders a general mobilization of the Mamluk forces. In a council, it is decided that a peace delegation be sent to Cairo under Guillaume de Beaujeu, Grand Master of the Knights Templar. However, Qalawun demands huge compensation for those killed in Acre, and sends a Syrian army to the coast of Palestine, near Caesarea.[7]November 10 Qalawun ("the Victorious") dies as the Egyptian Mamluk army sets out for Acre. He is succeeded by his eldest son Al-Ashraf Khalil as ruler of the Mamluk Sultanate. Khalil orders his allies and tributaries in Syria to prepare for a campaign next spring. Governors and castle commanders are ordered to assemble siege equipment and armor.[8]June 13 Shamsuddin Kayumars, Mamluk ruler of the Delhi Sultanate, is murdered and succeeded by Jalal-ud-din Khalji (or Firuz Shah I), founder of the Khalji dynasty, ending Mamluk rule and instigating the Khalji Revolution.[9]September 27 The 6.8 Ms Zhili earthquake affects the province of Zhili in China, with a maximum Mercalli intensity of IX (Violent), killing 7,270100,000 people.June 8 Beatrice Portinari, muse of the Italian poet Dante Alighieri, dies in Florence. In his Divine Comedy (La Divina Commedia), he transforms his memory of Beatrice into an allegory of divine love.[10]"Year without winter" An exceptionally rare instance of uninterrupted transition, from autumn to the following spring, in England and the mainland of Western Europe.[11]March 1 The University of Coimbra is founded in Lisbon by Denis I ("the Poet King"). He decrees that Portuguese is the official language of Portugal, replacing classical Latin in that capacity.The Dnyaneshwari is written in India. This holy book is a commentary on the Bhagvad Gita and is narrated by Dnyaneshwar.January 3 Constance of Portugal, queen consort of Castile (d. 1313)January 6 Otto Bodrugan, English landowner and politician (d. 1331)June 23 Jakushitsu Genk, Japanese Rinzai master and poet (d. 1367)August 4 Leopold I, Duke of Austria ("the Glorious"), German nobleman (d. 1326)October 15 Anne of Bohemia, queen consort of Bohemia (d. 1313)December 24 Khwaju Kermani, Persian poet and mystic (d. 1349)Agnes Haakonsdatter, Norwegian noblewoman and princess (d. 1319)Andrea Pisano (or Pontedera), Italian sculptor and architect (d. 1348)Barlaam of Seminara, Italian cleric, scholar and theologian (d. 1348)Beatrice of Silesia, queen of Germany (House of Piast) (d. 1322)Buton Rinchen Drub, Tibetan Buddhist religious leader (d. 1364)Daichi Sokei, Japanese Buddhist monk, disciple and poet (d. 1366)Giovanni Visconti, Italian cardinal, archbishop and co-ruler (d. 1354)Guido Gonzaga, Italian nobleman and knight (condottiero) (d. 1369)Hugues Quiret, French nobleman, admiral and advisor (d. 1340)Jacob van Artevelde, Flemish merchant and statesman (d. 1345)Jacopo Dondi dell'Orologio, Italian doctor and polymath (d. 1359)Johannes de Muris, French mathematician and astronomer (d. 1344)John Maltravers, English nobleman, knight and governor (d. 1364)John Parricida, German nobleman (House of Habsburg) (d. 1312)Jyotirishwar Thakur, Indian playwright, poet and writer (d. 1350)Ke Jiusi, Chinese landscape painter and calligrapher (d. 1343)Kitabatake Tomoyuki, Japanese nobleman and poet (d. 1332)Kuj Fusazane, Japanese nobleman, official and regent (d. 1327)Peter of Castile, Lord of Cameros, Spanish nobleman and prince (infante) (d. 1319)Pierre Bersuire (or Bercheure), French translator and encyclopaedist (d. 1362)Rabbenu Yerucham, French rabbi and scholar (posek) (d. 1350)Richard de Willoughby, English landowner and politician (d. 1362)Rudolf Hesso, Margrave of Baden-Baden, German nobleman (House of Zhringen) (d. 1335)Sesson Ybai, Japanese Buddhist monk, priest and poet (d. 1347)Theodore I, Marquis of Montferrat ("Palaiologos"), Byzantine nobleman and writer (d. 1338)Willem van Duvenvoorde, Dutch nobleman and knight (d. 1353)January 28 Dervorguilla of Galloway, Scottish noblewoman (b. 1210)February 3 Henry XIII, Duke of Bavaria, German nobleman, co-ruler and knight (b. 1235)March 24 John dal Bastone, Italian monk, priest and preacher (b. 1200)March 26 John Kirkby, English bishop, vice-chancellor and statesmanApril 26 Gaston VII, Viscount of Barn ("Froissard"), French nobleman and knight (b. 1225)May 10 Rudolf II, Duke of Austria, German nobleman (House of Habsburg) (b. 1270)June 8 Beatrice Portinari, Italian muse of Dante (b. 1266)June 13 Shamsuddin II, Mamluk ruler of the Delhi Sultanate (b. 1285)June 23 Henryk IV Probus ("the Righteous"), High Duke of Poland (b. 1258)July 10 Ladislaus IV ("the Cuman"), king of Hungary and Croatia (b. 1262)September 26 Margaret, Maid of Norway, queen of Scotland (b. 1283)November 10 Qalawun ("the Victorious"), Mamluk ruler of Egypt (b. 1222)November 28 Eleanor of Castile, queen consort of England (b. 1241)December 18Herman I, German nobleman (House of Henneberg) (b. 1224)Magnus III (or I) ("Birgersson"), king of Sweden (b. 1240)December 21 Gerhard I, Count of Holstein-Itzehoe, German nobleman, knight and regent (b. 1232)Adelaide, Countess of Auxerre, French noblewoman and ruler (suo jure) (b. 1251)Alice de Lusignan, Countess of Gloucester, French noblewoman (House of Lusignan) (b. 1236)Cecilia Cesarini (or Caecilia), Italian noblewoman and nun (b. 1203)Eison, Japanese Buddhist scholar-monk, disciple and priest (b. 1201)Elizabeth the Cuman, queen of Hungary (House of Arpad) (b. 1244)Fakhr al-Din Mustawfi, Persian finance minister, advisor and vizier^ Engel, Pl (2001). 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Vol III: The Kingdom of Acre, p. 344. ISBN978-0-241-29877-0.^ Sen, Sailendra (2013). A Textbook of Medieval Indian History, p. 80. Primus Books. ISBN978-9-38060-734-4.^ Williams, Hywel (2005). Cassell's Chronology of World History, p. 151. ISBN0-304-35730-8.^ Kington, J. Climate and Weather. HarperCollins Publishers, 2010.Retrieved from " 3One hundred years, from 1101 to 1200See also: Renaissance of the 12th centuryMillennia2ndmillenniumCenturies11thcentury12thcentury13thcenturyTimelines11thcentury12thcentury13thcenturyState leaders11thcentury12thcentury13thcenturyDecades1100s1110s1120s1130s1140s1150s1160s1170s1180s1190sCategories:Births Deaths Establishments DisestablishmentsvteEastern Hemisphere at the beginning of the 12th centuryThe 12th century is the period from 1101 to 1200 in accordance with the Julian calendar. In the history of European culture, this period is considered part of the High Middle Ages and overlaps with what is often called the "'Golden Age' of the Cistercians". The Golden Age of Islam experienced significant development, particularly in Islamic Spain.In Song dynasty China, an invasion by Jurchens caused a political schism of north and south. The Khmer Empire of Cambodia flourished during this century, while the Fatimids of Egypt were overtaken by the Ayyubid dynasty. Following the expansions of the Ghaznavids and Ghurid Empire, the Muslim conquests in the Indian subcontinent took place at the end of the century.Main article: 1100sThe Ghurid Empire converted to Islam from Buddhism.1101: In July, the Treaty of Alton is signed between Henry I of England and his older brother Robert, Duke of Normandy in which Robert agrees to recognize Henry as king of England in exchange for a yearly stipend and other concessions. The agreement temporarily ends a crisis in the succession of the Anglo-Norman kings.11011103: David the Builder takes over Kakheti and Hereti (now parts of Georgia).1102: King Coloman unites Hungary and Croatia under the Hungarian Crown.1102: Muslims conquer Seoro de Valencia.11031104: A church council is convened by King David the Builder in Urbnisi to reorganize the Georgian Orthodox Church.1104: In the Battle of Ertsukhi, King David the Builder defeats an army of Seljuks.1104: King Jayawarsa of Kadiri (on Java) ascends to the throne.[citation needed]1106: Battle of Tinchebray.11071111: Sigurd I of Norway becomes the first Norwegian king to embark on a crusade to the Holy Land. He fights in Lisbon and on various Mediterranean isles and helps the King of Jerusalem to take Sidon from the Muslims.1108: By the Treaty of Devol, signed in September, Bohemond I of Antioch has to submit to the Byzantine Empire, becoming the vassal of Alexius I.1109: On June 10, Bertrand of Toulouse captures the County of Tripoli (northern Lebanon/western Syria).1109: In the Battle of Nako, Boleslaus III Wrymouth defeats the Pomeranians and re-establishes Polish access to the sea.1109: On August 24, in the Battle of Hundsfeld, Boleslaus III Wrymouth defeats Emperor Henry V of Germany and stops German expansion eastward.Main article: 1110s1111: On April 14, during Henry V's first expedition to Rome, he is crowned Holy Roman Emperor.1113: Paramavishnulok is crowned as King Suryavarman II in Cambodia. He expands the Khmer Empire and builds Angkor Wat during the first half of the century. He establishes diplomatic relations with China.1115: The Georgian army occupies Rustavi in the war with the Muslims.1115: In Java, King Kamesvara of Kadiri ascends to the throne. Janggala ceases to exist and comes under Kadiri domination, highly possible under royal marriage. During his reign, Mpu Dharmaja writes Kakawin Smaradahana, a eulogy for the king which become the inspiration for the Panji cycle tales, which spread across Southeast Asia.[1]1116: The Byzantine army defeats the Turks at Philomelion.1116: Death of doa Jimena Daz, governor of Valencia from 1099 to 1102.c. 1119: The Knights Templar are founded to protect Christian pilgrims in Jerusalem.Main article: 1120sA Black and White Photo of the 12th century Cuenca Cathedral (built from 1182 to 1270) in Cuenca, Spain1120: On January 16, the Council of Nablus, a council of ecclesiastic and secular lords in the crusader Kingdom of Jerusalem, establishes the first written laws for the kingdom.1120: On November 25, William Adelin, the only legitimate son of King Henry I of England, drowns in the White Ship Disaster, leading to a succession crisis which will bring down the Norman monarchy of England.1121: On August 12, in the Battle of Didgori, the greatest military victory in Georgian history, King David the Builder with 45,000 Georgians, 15,000 Kipchak auxiliaries, 500 Alan mercenaries and 100 French Crusaders defeats a much larger Seljuk-led Muslim coalition army.1121: On December 25, St. Norbert and 29 companions make their solemn vows in Premontre, France, establishing the Premonstratensian Order.1122: The Battle of Beroia (Modern-day Stara Zagora, Bulgaria) results in the disappearance of the Pechenegs Turkish tribe as an independent force.1122: On September 23, the Concordat of Worms (Pactum Calixtinum) is drawn up between Emperor Henry V and Pope Calixtus II bringing an end to the first phase of the power struggle between the papacy and the Holy Roman Empire.1122: King David the Builder captures Tbilisi and declares it the capital city of Georgia, ending 400 years of Arab rule.1123: The Jurchen dynasty of China forces Koryo (now Korea) to recognize their suzerainty.1124: In April or May, David I is crowned King of the Scots.1125: On June 11, in the Battle of Azaz, the Crusader states, led by King Baldwin II of Jerusalem, defeat the Seljuk Turks.1125: In November, the Jurchens of the Jin dynasty declare war on the Song dynasty, beginning the JinSong wars.1125: Lothair of Supplinburg, duke of Saxony, is elected Holy Roman Emperor instead of the nearest heir, Frederick of Swabia, beginning the great struggle between Guelphs and Ghibellines.1127: The Northern Song dynasty loses power over northern China to the Jin dynasty.1128: On June 24, the Kingdom of Portugal gains independence from the Kingdom of Len at the Battle of So Mamede; (recognised by Len in 1143).Main article: 1130sThe temple complex of Angkor Wat, built during the reign of Suryavarman II in Cambodia of the Khmer Era.11301180: 50-year drought in what is now the American Southwest.11301138: Papal schism, Pope Innocent II vs. Antipope Anacletus II.1130: On March 26, Sigurd I of Norway dies. A golden era of 95 years comes to an end for Norway as civil wars between the members of Harald Fairhair's family line rage for the remainder of the century.1130: On Christmas Day, Roger II is crowned King of Sicily, the royal title being bestowed on him by Antipope Anacletus II.1132: The Southern Song dynasty establishes China's first permanent standing navy, although China had a long naval history prior. The main admiral's office is at the port of Dinghai.11321183: the Chinese navy increases from a mere 3,000 to 52,000 marine soldiers stationed in 20 different squadrons. During this time, hundreds of treadmill-operated paddle wheel craft are assembled for the navy to fight the Jin dynasty in the north.1135: King Jayabaya of Kadiri ascends to the throne.[2]11351154: The Anarchy takes place, during a period of civil war in England.1136: Suger begins rebuilding the abbey church at St Denis north of Paris, which is regarded as the first major Gothic building.1137: On July 22, the future King Louis VII of France marries Eleanor, the Duchess of Aquitaine.1138: On October 11, the 1138 Aleppo earthquake devastates much of northern Syria.1139: in April, the Second Lateran Council ends the papal schism.1139: On July 5, in the Treaty of Mignano, Pope Innocent II confirms Roger II as King of Sicily, Duke of Apulia, and Prince of Capua and invests him with his titles.1139: On July 25, the Portuguese defeat the Almoravids led by Ali ibn Yusuf in the Battle of Ourique; Prince Afonso Henriques is acclaimed King of Portugal by his soldiers.Main article: 1140sAverroes in a 14th-century painting by Andrea di Bonaiuto11401150: Collapse of the Ancestral Puebloan culture at Chaco Canyon (modern-day New Mexico).1141: The Treaty of Shaoxing ends the conflict between the Jin dynasty and Southern Song dynasty, legally establishing the boundaries of the two countries and forcing the Song dynasty to renounce all claims to its former territories north of the Huai River. The treaty

(links | edit)6th century (links | edit)5th century (links | edit)3rd century (links | edit)2nd century (links | edit)4th century BC (links | edit)1st century BC (links | edit)2nd century BC (links | edit)3rd century BC (links | edit)5th century BC (links | edit)6th century BC (links | edit)21st century BC (links | edit)11th century BC (links | edit)1000s (decade) (links | edit)1040s (links | edit)1299 (links | edit)1154 (links | edit)1163 (links | edit)1160s (links | edit)1141 (links | edit)1135 (links | edit)1204 (links | edit)View (previous 50 | next 50) (20 | 50 | 100 | 250 | 500)Retrieved from " WhatLinksHere/12th_century" Types of Germ Cell Tumors Germ cell tumors are a diverse group of neoplasms that originate from germ cells, the cells responsible for producing eggs and sperm. These tumors are most commonly found in the gonadstestes in males and ovaries in femalesbut they can also occur in extragonadal sites such as the mediastinum, sacrococcygeal area, and brain. Understanding the different types of germ cell tumors is essential for accurate diagnosis and appropriate treatment planning, as their behavior and prognosis can vary significantly.Types of Germ Cell Tumors Primarily, germ cell tumors are classified into two broad categories: seminomatous and non-seminomatous. Seminomatous tumors are composed of cells resembling early-stage germ cells and tend to grow more slowly. They are generally sensitive to radiation therapy and have a favorable prognosis. Non-seminomatous tumors, on the other hand, are more diverse and tend to be more aggressive. They often contain a mixture of different cell types, making their classification more complex.Within these categories, several specific tumor types are recognized. Seminomas are the most common seminomatous germ cell tumors, characterized by uniform cells with clear cytoplasm and prominent nucleoli. They are usually confined to the testis or ovary at diagnosis and respond well to treatment. Non-seminomatous tumors include embryonal carcinoma, yolk sac tumor, choriocarcinoma, teratoma, and mixed germ cell tumors, where multiple cell types are present. Types of Germ Cell TumorsTypes of Germ Cell Tumors Embryonal carcinoma is an aggressive tumor that often occurs in young men and can metastasize early. It has a tendency to produce alpha-fetoprotein (AFP) and human chorionic gonadotropin (hCG), which can aid in diagnosis. Yolk sac tumors are most common in children and young adults; they produce AFP and are highly malignant if untreated. Choriocarcinoma is characterized by rapid growth and early hematogenous spread, producing high levels of hCG and often leading to metastases in lungs and brain.Teratomas are unique among germ cell tumors because they contain tissue derivatives from all three germ layers: ectoderm, mesoderm, and endoderm. They can be mature or immature, with mature teratomas generally being benign, while immature ones have malignant potential. Teratomas are common in both testes and ovaries and may occur as part of mixed germ cell tumors.See also The large external hemorrhoids treatmentTypes of Germ Cell Tumors Mixed germ cell tumors are combinations of various germ cell components, reflecting the complexity of germ cell neoplasia. Their behavior and treatment depend on the predominant cell types present. For instance, a tumor with both seminomatous and non-seminomatous elements may require combined therapeutic approaches.The occurrence of germ cell tumors outside the gonads is also noteworthy. These extragonadal tumors often arise in midline structures such as the mediastinum, retroperitoneum, or brain, and tend to mirror their gonadal counterparts in histology and behavior. Their management often involves a combination of surgery, chemotherapy, and radiotherapy, tailored to the specific tumor type and location. Types of Germ Cell TumorsIn conclusion, germ cell tumors are a complex and heterogeneous group, each with distinct characteristics and clinical implications. Accurate identification and classification are crucial for determining prognosis and guiding effective treatment strategies. Advances in molecular biology and imaging continue to improve our understanding and management of these tumors, offering hope for better outcomes in affected patients. *The information on our website is not intended to direct people to diagnosis and treatment. Do not carry out all your diagnosis and treatment procedures without consulting your doctor. The contents do not contain information about the therapeutic health services of Acbadem Health Group. Share copy and redistribute the material in any medium or format for any purpose, even commercially. Adapt remix, transform, and build upon the material for any purpose, even commercially. The licensor cannot revoke these freedoms as long as you follow the license terms. Attribution You must give appropriate credit , provide a link to the license, and indicate if changes were made . You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use. ShareAlike If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original. No additional restrictions You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits. You do not have to comply with the license for elements of the material in the public domain or where your use is permitted by an applicable exception or limitation . No warranties are given. The license may not give you all of the permissions necessary for your intended use. For example, other rights such as publicity, privacy, or moral rights may limit how you use the material. The symptoms of a germ cell tumor depend on factors like the tumors size and location in your body.Ovarian germ cell tumorsOvarian germ cell tumors dont always cause symptoms. For instance, mature teratomas may not cause symptoms until theyve grown large enough to create pressure in your abdomen. Often, theyre discovered on an ultrasound to determine whats causing pelvic pain.Symptoms may include:Pelvic discomfort or pain.Painful mass in your ovary.Swollen belly (abdomen).Abdominal pain (similar to appendicitis).Irregular vaginal bleeding.Nausea.Testicular germ cell tumorsThe symptoms of testicular germ cell tumors are the same as those of testicular cancer.Symptoms include:Solid, firm lump in a testicle that grows bigger (with or without pain).Pain or heaviness in your scrotum.Abdominal pain or groin pain.Oddly shaped testicle.Back pain.Extragonadal germ cell tumorsA mass on your childs tailbone or in the center of their chest may signify a teratoma. Other symptoms of an extragonadal germ cell tumor depend on the tumors location.Trouble breathing (lungs).Weakness in legs (low back).Trouble peeing and pooping (pelvis).Swelling and acute or dull pain in your childs belly.Some germ cell tumors secrete reproductive hormones that may cause symptoms of early puberty or atypical sexual development in children. Females may develop breasts, grow pubic hair and get their periods early. Males may grow breasts (gynecomastia).What causes a germ cell tumor?Normal germ cells form in a developing human embryo. These cells eventually travel to the embryos ovaries or testicles, becoming egg cells or sperm cells.In contrast, germ cell tumors consist of cells that dont develop into fully formed eggs or sperm. The germ cells divide abnormally and become a tumor in your ovaries or testicles instead. In the case of extragonadal tumors, the germ cells travel to odd places in your body like your chest, brain, belly, low back and tailbone to form tumors.Researchers arent sure what causes germ cells to develop this way.What are the risk factors associated with germ cell tumors?You may be more likely to get a germ cell tumor if you have a family history of germ cell tumors or a history of certain conditions.These include:Untreated, undescended testicles (cryptorchidism).Turner syndrome.Klinefelter syndrome.The symptoms of a germ cell tumor depend on factors like the tumors size and location in your body.Ovarian germ cell tumorsOvarian germ cell tumors dont always cause symptoms. For instance, mature teratomas may not cause symptoms until theyve grown large enough to create pressure in your abdomen. 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They are, Benign tumors are non-cancerous and malignant tumors are cancerous. Most of the reported cancerous germ cell tumors occur as cancer involving the testicles (testicular cancer) or cancer involving the ovaries (ovarian cancer). Some cases have been reported where the germ cell tumors present themselves in other areas of the body like the abdomen, chest, or brain. The exact cause behind this is not known yet. The tumors present in various other parts of the body apart from ovaries and testes are called extragonadal germ cell tumors, and they are very rare. Germ cell tumors have shown a good response to treatment, and many of the responses are even in the later stages of the disease.How Are They Caused?The known cause for the abnormal growth of these germ cells is changes or mutations in genes. Thus, it develops into a tumor. Although, the exact etiology is yet to be studied. Following are the factors that can put one at the risk of developing a germ cell tumor:An Undescended Testicle - This means that either one of the testicles has not reached the scrotum properly.Presence of Any Birth Defects - in the central nervous system, urinary tract, lower spine, or genitals.Presence of Genetic Conditions - For example, Klinefelter syndrome or Turner syndrome. In these conditions, the patient may have a missing or extra sex chromosome in the genetic combination.Family History - Any history of other family members affected by a germ cell tumor.What Are The Types of Germ Cell Tumors?Many types of germ cell tumors have been reported in the literature, but the below-mentioned five types are more commonly encountered than others:Teratomas - These are also known as dermoid cysts. They are not usually indicative of cancer, but the possibility of cancer cannot be ruled out. They are the most commonly found germ cell tumors in the ovary. The usual treatment preferred for this condition is surgery.Germinomas - These are also known as dysgerminomas when they are present in the ovaries and seminomas if present in the testes. The cancerous cell which is found in the brain is non-seminomatous germ cell tumors.Embryonal Carcinoma - This type of tumor has cancerous cells that mingle with another type of germ cell tumor.Choriocarcinoma - It is a rare type of cancer and involves the placenta. It is known to affect both the mother and the baby.Yolk Sac Tumors - They are also called endodermal sinus tumors, and mostly they are cancerous. They usually form in the ovaries and testes. It is a very aggressive type of tumor that can metastasize or invade the lymph nodes and various other parts of the body. It is often an aggressive cancer that spreads quickly to the lymph nodes and other parts of the body. The commonly preferred treatment for them is surgery and chemotherapy.What Are the Signs and Symptoms?The signs and symptoms are usually dependent on the location and type of tumor, along with various other factors. The following are the most commonly encountered symptoms by the patient:Any abnormal mass present on the ovaries or testes.Presence of pain and swelling in the belly. The swelling can be due to a tumor.Issues with bathroom procedures like there can be difficulty while passing stools or holding the urine, etc.Development of the breast, pubic hair, bleeding from the vagina at an earlier age than usual.Pain in the chest.Presence of any lump in the stomach.Irregularly shaped testicles or testes with irregular size.Any weakness in the legs.Shortness of breath.Wheezing.Who Is Impacted by Cancer of the Germ Cells?Although germ cell tumors can affect anyone, they most frequently affect newborns, kids, teens, and young adults. Age-related changes in diagnoses occur. Diagnoses, for example, are more common between the ages of zero and four than in the years that follow. As adolescence draws near, diagnoses of germ cell tumors rise. Although they can affect persons in their 20s and 30s, ovarian germ cell tumors most commonly affect those between the ages of 10 and 14. Individuals between the ages of 15 and 35 and younger children are more likely to develop testicular germ cell tumors. Between 40 percent and 50 percent of germ cell tumor evaluations from birth until the age of four are extragonadal tumors.What Are the Risk Factors?The following factors increase the likelihood of testicular germ cell tumors:Having White Skin.Low-quality sperm.Cancer of the testicles.Testicular microlithiasis (a disorder where the testicles develop little calcium lumps).Orchitis (an inflammatory disorder that affects either or both of the testicles).A compromised immune system is brought on by the transplantation of organs.How Can It Be Diagnosed?Initially, the physician will ask questions about the signs and symptoms that one is facing, and after that certain physical examinations and the following examinations or tests can be performed to confirm the diagnosis:Biopsy - The doctor will take a tissue sample to test under a microscope.Blood Tests - They are helpful in assessing the overall blood health status, and indirectly, they will also help to diagnose the underlying condition or examine various systems of the body.Genetic Test - This can be required if one has a positive family history of germ cell tumors.Imaging tests - Certain imaging tests like CT (computed tomography), MRI (magnetic resonance imaging), ultrasound, X-ray, etc., can be done to know the location and extent of the tumor and also aid in the confirmatory diagnosis and treatment planning along with deciding the prognosis.How Can They Be Treated?The treatment depends on the type of tumor, its extent or spread, invasion, location, patient factors, etc. Patients may require a combination of various treatments, which will be decided by the doctor or specialist.The following are the most commonly used treatment options:Surgery - This is done to remove the tumor completely or sometimes partially. Sometimes, it can also involve the removal of the reproductive organs like testes or ovaries, etc., to get a better prognosis and complete removal of tumor cells.Chemotherapy - In this, certain drugs or medications are used to treat the condition.Radiation - In this, various types or ranges of radiation beams are used to kill the cancerous cells.What Is the Prognosis of Germ Cell Tumor?For the majority of germ cell cancers, the prognosis is good. The condition is frequently cured when the tumor is removed. For example, after therapy, the survival rate for testicular cancer is 95 percent. The survival rate for ovarian germ cell tumors is 93 percent. Among kids suffering from germ cell cancers, the success rate varies between 82 percent and 90 percent.Conclusion:Germ cell tumors affect the reproductive organs. When treated, they show better responses and a better prognosis. One can consult the physician when they develop any of the symptoms or have a positive family history of the tumor. Now with the help of online medical platforms, it has become easier to connect with a physician or specialist at the ease of their home. So, one can contact a specialist online to learn more about this condition and the ways to manage it. Germ cells are the future reproductive cells that make eggs in a female and sperm in a male. During the development of a baby in the womb, if these cells grow unusually or underdeveloped, they form germ cell tumors of testes or ovaries. When these germ cells fail to migrate appropriately to the gonads, they spread to other parts of the body and form extragonadal germ cell tumors.Boys with undescended testes (cryptorchidism), girls with missing X (sex) chromosome (Turner syndrome), males with single X and Y chromosomes with resistance to male hormones (androgens), also known as androgen insensitivity syndrome, male born with an The extra X chromosome, Caucasians, family history, testicular tumor history, HIV, orchitis (inflammation of the testes), testicular microlithiasis, etc., are the risk factors of developing germ cell tumors.Some germ cell tumors are inherited, meaning the genetic defect causing germ cell tumor, or its risk is passed on to their children from parents. Siblings of an affected member are also at risk.Germ cell tumors are rare and are not common. Only 2% to 3% of the overall childhood tumors account for germ cell tumors. If they occur, they usually occur in children and young adults. Babies and teens with hereditary disorders are at risk of developing germ cell tumors.Based on their microscopic appearance, germ cell tumors are classified as germinomatous and nongerminomatous. Of these two, the nongerminomatous germ cell tumors tend to grow faster with earlier age of occurrence and low survival rates.Germ cell tumors are highly curable in the majority of cases. It becomes difficult to treat and control its growth in a terminal or advanced stage of the condition but still, they respond to the treatment very well.Germ cell tumors have 80% to 90% successful curing rates based on their staging. Surgical excision, chemotherapy, and radiation therapy are the treatment options based on the type and stage of the tumor. Recurrences have been reported after treatment for which chemotherapy is being employed.Germ cell tumors cause swelling, abdominal pain, chest pain, testicular pain (may or may not be present), and associated back pain. The mass itself is not painful, but its invasion of the nearby organs and its compression can cause pain.Germ cell tumors are highly radiosensitive, and they respond to radiotherapy very well, especially germinomatous tumors. Up to 80% cure is achieved with radiotherapy alone. But nongerminomatous tumors are comparatively less radiosensitive with poor prognosis rates.Nongerminomatous mediastinal germ cell tumor, metastatic tumors (spreading to other organs, especially lungs), high serum tumor marker levels indicate poor or bad prognosis.Tumor or cancer arising from the testes germ cells (sperm-producing cells) are known as testicular germ cell tumors. These are of two types - seminoma and nonseminoma. Teratoma, embryonal carcinoma, yolk sac tumors, and choriocarcinoma are nonseminomas. Testicular tumors can also be a combination of seminomas and nonseminomas.Mediastinum consists of the heart, windpipe, food pipe, major blood vessels, and lymph nodes. Due to the failure of the proper migration of germ cells to the gonads during embryonic development, some germ cells reach other parts of the body like the brain, mediastinum, spine, etc. Such unevenly developed germ cells in the mediastinum cause mediastinal germ cell tumor or the tumor that originated in the gonads and spread to the mediastinum. Symptoms include shortness of breath, chest pain, cough, weight loss, etc.Not all testicular cancers are germ cell tumors, but germ cell tumors of the testes are the most common type. They comprise 90% of testicular cancers. Seminoma or germinomatous and nonseminoma or nongerminomatous are its two types based on their microscopic appearance.Dysgerminoma is the commonest ovarian germ cell malignancy. Malignant cells invade the ovarian germ cells (cells that produce ova or eggs). Symptoms include abnormal uterine bleeding in the absence of menses, abdominal pain, and swelling. They are diagnosed during a routine pelvic exam. They tend to metastasize through blood, lymph or invade the nearby tissues. Dr. Patil Pratik PramodMedical oncology Tags:tumorsgerm cell tumors Most popular articles Ask your health query to a doctor online Medical oncology*guaranteed answer within 4 hours Disclaimer: No content published on this website is intended to be a substitute for professional medical diagnosis, advice or treatment by a trained physician. Seek advice from your physician or other qualified healthcare providers with questions you may have regarding your symptoms and medical condition for a complete medical diagnosis. Do not delay or disregard seeking professional medical advice because of something you have read on this website. Read our Editorial Process to know how we create content for health articles and queries. and it never changesAsk a doctor onlineExplore all specialtiesDisclaimer: No content published on this website is intended to be a substitute for professional medical diagnosis, advice or treatment by a trained physician. Seek advice from your physician or other qualified healthcare providers with questions you may have regarding your symptoms and medical condition for a complete medical diagnosis. Do not delay or disregard seeking professional medical advice because of something you have read on this website. Read our Editorial Process to know how we create content for health articles and queries.Copyright 2025, iCliniq - All Rights Reserved If you just found out that you or your child has a germ cell tumor, you may have a lot of questions about what it means and what comes next. There are many kinds of germ cell tumors, and only some of them are cancer.Germ cells dont have anything to do with germs. They get their name from the word germinate, which means to begin to grow. Thats because as a baby develops before birth, germ cells move into place and become either eggs in the ovaries or sperm in the testicles.Sometimes, a group of germ cells grows in a way thats not normal. A tumor forms. This usually happens in an ovary or testicle. You can also get a germ cell tumor in your brain, chest, belly, pelvis, or lower back, but its not as common.Changes in the genes of a germ cell can cause it to grow out of control, which leads to a tumor. Doctors arent sure what triggers that change.Still, you may be more likely to get a germ cell tumor if you have:Anyone can get an ovarian germ cell tumor. But those who are 30 oryounger are more likely to develop it.Things that raise your risk of developing testicular germ cell tumors include:Being whitePoor sperm qualityTesticular cancerTesticular microlithiasis. Its a condition in which small lumps of calcium form in the testicles.HIVOrchitis. Its a condition that causes one or both of your testicles to become inflamed.A weakened immune system caused by an organ transplantThere are several, but five are more common than others:Teratomas, sometimes called dermoid cysts, are not usually cancer, but they can be. Theyre the most common germ cell tumors found in the ovaries. Usually, theyre treated with surgery.Germinomas are typically cancer, though they tend to grow slowly and can usually be cured. They are most often found in the brain and spinal cord, although they can also grow in the ovaries or testicles as well.Yolk sac tumors, (also called endodermal sinus tumors) are usually cancer. They form in the testicles and ovaries. Its often an aggressive cancer that spreads quickly to the lymph nodes and other parts of the body. Theyre typically treated with surgery and chemotherapy.Embryonal carcinoma has cancer cells that usually mix with another type of germ cell tumor. For example, embryonal carcinoma cells could mix with a teratoma and make it cancer.Choriocarcinoma is a rare cancer that happens in the placenta. It can affect both the mother and baby.Extragonadal germ cells are tumor cells that form in body parts outside of the ovaries or testicles. These are rare. Types of extragonadal germ cell tumors include:Mediastinal germ cell tumors. These form in the area between the chest and the spine, where the heart is located.Pineal region tumors form in the middle of the brain behind the brain stem.Retroperitoneal germ cell tumors form in the back of your belly.Sacrococcygeal germ cell tumors form in the lower part of your spine.It depends on the type of tumor and where its located. Common signs of germ cell tumors include:A mass on your ovaries or testiclesBelly pain and swelling (caused by tumor)Bathroom troubles (a hard time pooping or holding in your pee, if the tumor is near your pelvis)Breast growth, pubic hair, or vaginal bleeding at an earlier age than normalBelly or chest painLump or a mass in the bellyor testiclesTesticles that arent the right shape or sizeWeakness in your legs (if the tumor is in the lower back)Wheezing or shortness of breath (if the tumor is near the lungs)Theyll start by asking questions about your health and symptoms, and then do a physical exam. After that, you may get:A biopsy. Your doctor takes a sample of the tumor to test it for cancer and help guide your treatment.Blood tests. You may get different tests to check the overall health of your blood, kidneys, and liver. Your doctor may also test for signs of a tumor, like high hormone levels. And if they thinkyou have a genetic condition, you may also get a genetic test.Imaging. CT,MRI, X-ray, ultrasound, and bone scans can show where the tumor is and whether it has spread.It depends on the kind of tumor you have, where it is, and if it has spread. Germ cell tumors can spread to other parts of your body such as lymph nodes, the lungs, liver, or brain. Your doctor will also take your age and overall health into account. You may need more than one type of treatment. Your doctor will help you figure out the best approach.Treatment options usually include:Surgery to remove the tumor. If its cancer, your doctor needs to remove all of the cancer cells. That could mean removing the testicle or ovary and fallopian tube where the tumor is located.Chemotherapy (chemo), uses drugs to kill cancer. Its often used if the tumor is cancer and has spread to other parts of your body.Radiation uses high energy from X-rays or other sources to kill cancer cells. Newer kinds of radiation focus as closely as possible on the tumor to help limit side effects.The 5-year survival rate looks at your or your childs likelihood of surviving 5 years after the cancer was first found.For children under 15 with germ cell tumors, the outlook is good, and the 5-year survival rate is high at 90%. For those between the ages of 15-19, the 5-year survival rate is 93%.After you or your child complete treatments, its possible for the tumor to come back. This is called a relapse. Talk to your doctor about what to watch out for, and make sure to go to your follow-up appointments. Germ cell tumours develop in germ cells. Theseare the cells in the body that develop into sperm and eggs. Germ cell tumours most often develop in the ovary or testicle becausethisis where most germ cells are.But germ cells can sometimes be left behind in other parts of the body from when you developed in the womb. So these tumourscan develop anywhere in your body where there are germ cells.Germ cell tumours that grow outside the ovary or testicle are very rare. Doctors call them extragonadal germ cell tumours (EGGCT).The main treatments are surgery and chemotherapy. Your treatment depends on your type of germ cell tumour and whereabouts it is in your body. Types of germ cell tumour Doctors use different names to describe the different types of germ cell tumours. The name describes:whereabouts in the body it started - such as ovarian or testicularwhat the tumour looks like under the microscopeGerm cell tumours can start in the:testicles ovaries chest (mediastinal tumour) back of the tummy (retroperitoneal tumour) brain (pineal region tumour) lower spine (sacrococcygeal tumour)Some tumours are non cancerous (benign). And some are cancerous (malignant):Benign germ cell tumoursinclude mature teratomas.Malignant germ cell tumoursare split into 2 main groups:seminoma germ cell tumours (in females these are called dysgerminomas)non seminoma germ cell tumours (in females these are called non dysgerminomas)Malignant non seminoma tumours include:immature teratomasyolk sac tumourschoriocarcinomasembryonal carcinomasSome non seminomas develop from just one type of cell. And some develop from a mixture of cell types. So, for example, a tumour can contain a mix of some teratoma cells and some embryonal carcinoma cells.Seminomas are sometimes called pure seminomas. They only contain one type of cell. Some germ cell tumour contain both seminoma cells and non seminoma cells. Doctors usually class and treat these as non seminoma tumours. Testicular germ cell tumours Most testicular cancers are germ cell tumours. The 2 main types of testicular germ cell tumours are seminomas and non seminomas. Ovarian germ cell tumours Women can developovarian germ cell tumours. Many of these are non cancerous (benign). But some are cancerous. Only about 1 or 2% of ovarian cancers are this type.Most ovarian germ cell tumours occur in teenagers or young women, although they also occur in women in their 60s.Ovarian teratoma is a type of ovarian germ cell tumour. Types of extragonadal germ cell tumour (EGGCT) Cancers that develop from germ cells in other parts of the body are rare. The medical name for germ cell tumours that develop outside of the ovaries or testicles is extragonadal germ cell tumour (EGGCT).Germ cell tumours can start in:a part of the chest called the mediastinum (mediastinal germ cell tumours)the brain (pineal region tumour)the back of the tummy (retroperitoneal germ cell tumour)the lower spine (sacrococcygeal germ cell tumour)The mediastinum is the area between the lungs, which contains the heart.It is the most common place for extragonadal tumours in adults. Pineal region tumours are rare brain tumours.The pineal gland is in the middle of the brain, just behind the brain stem.The most common type of pineal region tumour is a type of germ cell tumour called germinoma. Retroperitoneal germ cell tumours start in the retroperitoneum. The retroperitoneum is the area at the back of the tummy (abdomen). It is where there are organs such as the kidneys, pancreas, bladder and some major blood vessels.The treatment for retroperitoneal germ cell tumours is similar to testicular germ cell tumours. Sacrococcygeal germ cell tumours develop at the bottom of the spine by the tailbone (coccyx). This area is called the sacrococcygeal region.Although this is the most common type of germ cell tumour in children, it is very rare in adults. Some babies are diagnosed with a sacrococcygeal tumour before they are born, during a pregnancy (antenatal) scan. These tumours are often non cancerous (benign). Treatment for germ cell tumours Your treatment depends on:where the tumour isthe size and whether it has spread (the stage)the type of germ cell tumourThe main treatments are surgery and chemotherapy.SurgeryYou usually have surgery to remove germ cell tumours. This might be all the treatment you need if the tumour is small and easy to remove. ChemotherapyYou might havechemotherapyafter surgery. Germ cell tumours generally respond very well to chemotherapy. Most people are cured.Even cancers that have spread are still very treatable with chemotherapy.You can read more about the treatment for your type of germ cell tumour at the links above. Coping Coping with a diagnosis of a rarecancer can be especiallydifficult. Being well informed about your cancer and its treatment can help. It can make it easier to make decisions and cope with what happens.Talking to other people who have the same thing can also help.Our discussion forum Cancer Chatis a place for anyone affected by cancer. You can share experiences, stories and information with other people. You can call our nurse freephone helpline on 0808 800 4040. They are available from Monday to Friday, 9am to 5pm. Or you can send them a question online. The Rare Cancer Alliance offer support and information to people with rare cancers.It has a forum where you might be able to meet others with the same cancer as you. Cancer: Principles and Practice of Oncology (10th edition)VT DeVita, TS Lawrence, SA RosenbergLippincott, Williams and Wilkins, 2015Germ cells are cells that populate the gonads and develop into sperm in males and ova in females. They are called germ cells, which is short for germinate, a term that means to grow or develop. Sometimes, germ cells may grow out of control and form a tumor. These tumors can arise in ovaries, testes, or occasionally in other locations such as the sacral area (at the bottom of the spine) or mediastinum (the area between the lungs). Germ cell tumors are most common among teens aged 15 to 19. Its one of the more common cancers diagnosed among adolescents in this age range, accounting for about 14% of all teen cancers. Germ cell tumors are also diagnosed among younger children and adults, but it happens less frequently. The good news is that adolescents and children who are diagnosed with germ cell tumors usually recover, because there are effective treatments for the condition. Germ cell tumors are one of the most curable types of cancers with 5-year survival rates exceeding 90 percent, says Yale Medicine pediatric hematologist-oncologist Farzana Pashankar, MD. They are treated with a combination of chemotherapy and surgery and should be managed by a multidisciplinary team. Germ cell tumors are benign (noncancerous) or malignant (cancerous) growths that arise from specialized cells called germ cells, which develop in a baby before birth (a fetus). Germ cells form within the yolk sac, a structure that helps to nourish a fetus before the placenta forms. The germ cells travel from the yolk sac to the fetal midsection, where the reproductive organs form. In males, germ cells transform into sperm within the testes; in females, they transform into eggs within the ovaries. Occasionally, some germ cells may mistakenly travel from the yolk sac to other parts of the body, where they may later develop into germ cell tumors in those locations. They also may transform into germ cell tumors within the testes or ovaries. When germ cell tumors are benign, they may grow, but they wont spread beyond the structure where theyre located. When theyre malignant, they have the potential to spread to other organs in the body. Germ cell tumors may arise in different body parts, including: Testes Ovaries Brain Abdomen Chest TailboneWhen germ cell tumors occur in the central nervous system (the brain and spinal cord), they often develop close to the pineal gland and pituitary gland, though they can affect other areas of the brain as well. These tumors most commonly affect people between the ages of 10 and 20. They are more common in males than females.Germ cell tumors are classified by these names, based on their location and tumor type:Teratomas, which form in testes, ovaries, and non-reproductive sites and are usually benignDysgerminomas, which form within the ovariesGerminomas, which form in brainSeminomas, which form in the testesNonseminomatous germ cell tumors (NSGCTs), which are made up of more mature germ cells than seminomas, include:Yolk sac tumors, which are most common among young children and may form in the testes, ovaries, or non-reproductive sitesChoriocarcinomas, which are rare and may form in the testes, ovaries, or non-reproductive sitesEmbryonal carcinomas which are rare and may form in testes, ovaries, or non-reproductive sitesMixed germ cell tumors, which appear in the ovaries, testes, and non-reproductive sitesDoctors arent sure what causes germ cell tumors, but some people who have rare inherited conditions affecting the sex chromosomes (X and Y) or reproductive organs may be at increased risk of the condition. People with germ cell tumors may experience: A noticeable mass or lump in the affected body part, such as a testicle Pain in the affected body part A testicle that is shaped abnormally or is smaller or larger than it should be Lump or swelling of abdomen Constipation Cough Trouble breathing Headache Vomiting If a child or teen has a suspected germ cell tumor, the doctor will gather information about their medical history, examine them during an office visit, and send them for tests that can confirm the presence of a tumor. The doctor will ask questions about an individuals personal and family health history, to see if the child or adolescent may have an inherited condition that affects the sex chromosomes or reproductive organs, or whether a male may have an undescended testicle. During a physical exam for a male, the doctor will feel for a testicular lump or other mass, to see if it may be suggestive of a germ cell tumor. Different blood tests may help doctors confirm a germ cell tumor; the tests look for high levels of the following hormones in the blood: Alpha-fetoprotein, a hormone that normally appears in a pregnant womans blood, as well as the liver and yolk sac of a growing fetus; its considered a tumor marker for testicular germ cell tumors. Beta human chorionic gonadotropin (hCG), which is sometimes called the pregnancy hormone, because its found in a pregnant womans blood; when a person isnt pregnant, high levels in the blood may signify a germ cell tumor.Additionally, doctors may use imaging tests to look for a tumor within the body: When doctors identify a mass they believe may be a germ cell tumor, they will perform a biopsy of the tissue sample. If tissue analysis shows that a germ cell tumor is present, doctors will check to see if the tumor is benign or malignant. Knowing whether or not the tumor is cancerous helps doctors determine treatment.Children and teens with germ cell tumors typically undergo surgery to remove the tumor. If a biopsy shows that the tumor is benign, removal of the tumor should be the only treatment. When the germ cell tumor is malignant, however, the surgeon removes the tumor, as well as a healthy margin of surrounding tissue, with hopes of eliminating all of the cancer cells in the area. Surgery alone may be an effective treatment for some malignant germ cell tumors, depending on individual circumstances. When it isnt, doctors offer chemotherapy to help eradicate any cancer cells that may be lingering in the body. Sometimes after completion of chemotherapy, further surgery may be needed to remove all remaining sites of disease. The good news is that most children and teens with malignant germ cell tumors can be treated successfully.Germ cell tumors are best treated at a large volume center by a multidisciplinary team, says Dr. Pashankar. At Smilow Cancer Hospital in New Haven, we have a dedicated team of oncologists, pathologists, pediatric surgeons, gynecological oncologists, and urologists with expertise in treating germ cell tumors. Our physicians are at the leading edge of research in germ cell tumors and in designing clinical trials for patients with these tumors.""Treating the individual and family in a patient and family centered approach is very important to us,"Dr. Pashankar adds."As germ cell tumors occur in adolescence and young adults with unique psychosocial needs, we have a dedicated Adolescence and Young Adult program, to help meet the needs of this population and provide holistic care.

Germ cell. Is germ cell cancer rare. What is germ cell cancer. Types of germ cell ovarian cancer. Germ cell tumors. What is stage 4 germ cell cancer.

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