

Pancreatic Cancer

胰腺癌

Pancreatic cancer symptoms are typically vague, making it difficult to diagnose early. Because these cancers are often caught at a late stage, they have been hard to treat in the past.

Today, UCSF Medical Center is using new technology that's resulting in earlier diagnosis of pancreatic cancer as well as earlier diagnosis of benign cysts, lesions and tumors that could lead to cancer if not treated. In addition, we're providing new customized treatments and follow-up care that are saving more lives.

The Pancreas

The pancreas is an oblong organ, about six inches long, located in the upper abdomen. It has two major functions: The first is to produce digestive enzymes — proteins that help digest food into the small intestine. Cells that perform this function make up the exocrine pancreas.

The second major function is to produce hormones that are secreted into the blood. These cells make up the endocrine pancreas.

胰腺癌的症狀通常是模糊的，從而難以早期診斷。因為這些癌症通常後期階段才被發現，以前，胰腺癌是很難的治療。

如今，UCSF 醫學中心採用新技術可以係早期診斷胰腺癌、以及早期良性囊腫、病變和腫瘤。如果不及時治療這些病變，可能會導致癌症的。此外，我們提供了新的個人化治療，和跟進護理服務，從而挽救更多的生命。

胰腺

胰腺是一個長形元件，大約六英寸長，位於上腹部。它有兩個主要功能：一是產生消化酶—幫助消化食物進入小腸的蛋白質。由執行此功能的細胞組成外分泌胰腺。

第二個主要的功能是產生被分泌到血液中的激素。這些細胞組成的胰腺內分泌。

Endocrine Pancreas

The endocrine pancreas is made up of specialized cells, referred to as islets of Langerhans, that produce hormones. The most important hormone produced is insulin that helps control sugar in the blood.

Cancers that begin in islet cells are called islet cell tumors or pancreatic neuroendocrine tumors. These tumors are rare and may produce hormones that cause very low or very high blood sugars or symptoms such as stomach pain and severe diarrhea.

Exocrine Pancreas

The exocrine pancreas is made up of ducts and acini, which are small pockets at the end of the ducts. Cells lining the ducts are the most likely to develop cancer, called ductal adenocarcinomas, the most common type of pancreatic cancer.

These two types of tumors are treated very differently.

At UCSF, we have specialists who conduct research on both types of pancreatic cancers. We have one of the few pancreas cancer research programs in the nation with a team dedicated to learning more about these tumors and developing better treatments.

Risk Factors

Although the cause of pancreatic cancer is unknown, risk factors have been

胰腺內分泌

胰腺內分泌是由獨特的細胞組成，稱為胰島，會產生的激素。而所產生最重要的激素是胰島素，有助於控制血液中的糖份。

從胰島細胞開始的癌稱為胰島細胞瘤或胰腺神經內分泌腫瘤。這些腫瘤是罕見的，可能會產生荷爾蒙，造成非常低或非常高血糖或其他症狀，如胃痛和嚴重腹瀉。

胰腺外分泌

外分泌胰腺由導管和腺泡組成，這是在該導管末端的小口袋。導管裡面的表層細胞是最有可能發展成癌症，稱為導管腺癌，是胰腺癌最常見的類型。

這兩種類型的腫瘤的治療方法差異很大。

我們 UCSF 有專家對兩種類型的胰腺癌進行研究。全國只有少數胰腺癌研究項目，我們參與其中一個，我們有一個專責團隊，致力研究這腫瘤和開發更佳的治療方面。

風險因素

儘管胰腺癌的病因不明，但已經確定那些風險因素會增加一個人患這

identified that increase a person's chance of developing the disease. These include:

- **Smoking** — People who smoke cigarettes are two to three times more likely to develop pancreatic cancer than non-smokers.
- **Age** — The risk of pancreatic cancer increases with age. People over the age of 60 are more commonly diagnosed with the disease.
- **Race** — African Americans are more likely than Asians, **Hispanics** and whites to develop pancreatic cancer.
- **Chronic Pancreatitis** — A **history** of chronic pancreatitis may increase the likelihood of developing pancreatic cancer.
- **Diabetes** — Some people with diabetes are more commonly **affected by** pancreatic cancer. Diabetes may also be a complication or an early sign of pancreatic cancer.
- **Diet** — A diet high in fats, especially processed red meats, may increase the chance of developing pancreatic cancer.
- **Weight** — Overweight people are more likely than others to develop pancreatic cancer.

Genetics

While most cases of pancreatic cancer don't run in families, inherited conditions may increase the chance of developing pancreatic cancer.

病症的機會率。這些風險包括：

- **吸煙** - 抽煙的人患上胰臟癌的機率比不吸煙者高兩到三倍。
- **年紀** - 患胰腺癌的風險隨著年齡增加。60歲以上的人較為普遍確診患有此病。
- **種族** - 非洲裔美國人比亞洲人，拉丁美裔和白人更容易患胰腺癌。
- **慢性胰腺炎** - 有慢性胰腺炎病史的會增加患胰腺癌的可能性。
- **糖尿病** - 有些糖尿病人較為普遍受胰腺癌影響。糖尿病還可能是胰腺癌的併發症或早期徵兆。
- **飲食** - 高脂肪飲食，尤其是加工紅肉，會增加患胰腺癌的機率。
- **體重** - 超重的人比其他人更容易患上胰腺癌。

遺傳學

雖然大多數情況下胰腺癌不會家族遺傳，但遺傳因子可能會增加患胰腺癌的機率。

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| <p>About 5 percent to 10 percent of pancreatic cancers are considered hereditary, or related to a specific genetic mutation. Pancreatic cancer is considered to run in a family when two or more first-degree relatives — such as parents, siblings or children — have the condition. This is sometimes referred to as familial pancreatic cancer (FPC). If a person has a first-degree relative with pancreatic cancer, his or her risk is significantly greater than the average person's.</p> <p>An increased risk also has been associated with a number of genetic syndromes including hereditary breast, ovarian and colon cancer and a serious type of skin cancer called familial atypical multiple mole syndrome (FAMMM).</p> | <p>大約 5% 到 10% 的胰腺癌是屬遺傳性的，或與特定的基因突變有關。當兩個或兩個以上一級親屬 — 如父母，兄弟姐妹或子女 — 具備這些遺傳徵狀，胰腺癌被認為是在該家族遺傳。這有時又稱為家族性胰腺癌（FPC）。如果一個人有一個一級親屬患有胰腺癌，他或她的風險顯著大於一般人的。</p> <p>風險增加也許與與許多遺傳綜合徵狀有關聯，包括遺傳性乳腺癌，卵巢癌和結腸癌和一種嚴重的皮膚癌稱為家族性非典型多痣綜合徵（FAMMM）。</p> |
| <p>Signs and Symptoms</p> <p>Pancreatic cancer often is called a "silent" disease because it typically doesn't cause symptoms early on. The cancer may grow and spread for some time before symptoms develop, which may be so vague that they are initially ignored. For these reasons, pancreatic cancer is hard to detect early. In many cases, the cancer has spread outside the pancreas by the time it is found.</p> <p>When symptoms appear, their type and severity depend on the location and size of the tumor.</p> <p>Common symptoms may include:</p> | <p>體徵和症狀</p> <p>胰腺癌常常被稱為“無聲”的疾病，因為它早期通常不會引起症狀。癌症在症狀出現前可能已經生長和擴散了一段時間，它的症狀可以是非常模糊的，在最初時被忽略。由於這些原因，胰腺癌很難於早期檢測到。很多時，癌症由胰腺向外擴散後才被發現。</p> <p>當症狀出現時，它們的類型和嚴重程度取決於腫瘤的位置和大小。</p> <p>常見的症狀包括：</p> |

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| <ul style="list-style-type: none"> • Jaundice — If the tumor blocks the bile duct so bile can't flow into the intestines, jaundice may occur, causing the skin and whites of the eyes to turn yellow, the urine to become dark and the stool to turn clay-colored. • Pain — As the cancer grows and spreads, pain often develops in the upper abdomen and the back. The pain may increase after a person eats or lies down. • Weight Loss — Cancer of the pancreas can also cause unintentional weight loss. This is often due to an inadequate intake of calories because of nausea, vomiting and loss of appetite. • Digestive Problems — Digestive problems may occur if the cancer blocks the pancreatic juices from flowing into the intestines, which help the body break down dietary fats, proteins and carbohydrates. Stools may be different than usual and appear pale, bulky or greasy, float in the toilet, or be particularly foul-smelling. | <ul style="list-style-type: none"> • 黃疸 - 如果腫瘤塊阻塞膽管，令膽汁不能流入腸內，可能會出現黃疸，造成皮膚和眼白變黃，尿液變暗和糞便轉為陶土色。 • 疼痛 - 由於癌症生長和擴散，疼痛通常發生在上腹部和背部。患者可能在進食後或躺下時疼痛會增加。 • 消瘦 - 胰腺腫瘤也可以引起無故消瘦。這往往是因為噁心、嘔吐及食慾不振、卡路里攝入不足而引起。 • 消化問題 - 胰液幫助身體分解食物脂肪，蛋白質和碳水化合物，如果腫瘤阻上胰液流入腸道，便可能會出現消化問題。大便可能會異於平常，色澤變得蒼白、大件或肥膩、漂浮在廁所、或者特別惡臭。 |
| <p>Diagnosis</p> <p>It is important to note that pancreatic cancer is not just one disease. There are many types of pancreatic tumors, each with its own unique prognosis and treatment recommendations. Currently, there is no screening exam of proven value for detecting pancreatic cancer in the general population.</p> | <p>診斷</p> <p>值得注意的是胰腺癌不只是單一疾病的。胰腺腫瘤是有許多類型的，每種都有其自己獨特的預後和治療的建議。目前，還沒有為胰腺癌普查的價值作篩選測試。</p> |

In making a diagnosis of pancreatic cancer, your doctor may conduct the following tests.

Medical History and Physical Examination

A series of tests may be necessary to make a definite diagnosis. Your doctor will first start by asking about your medical history and any physical complaints or symptoms, specifically recent weight loss, pain and changes in appetite, bowel patterns or skin color. The doctor will then complete a thorough physical exam, which will include palpation and observation of the chest and abdomen.

Lab Tests

Blood specimens may be collected and less commonly, urine or stool samples. Of particular interest to the doctor is the level of "bilirubin" and "liver enzymes" in a patient's blood, which measures liver and pancreas function.

Another blood test commonly performed is CA19-9 (carbohydrate antigen 19-9). CA19-9 is referred to as a "tumor marker," which is a chemical substance in the body that may be found at higher levels if cancer is present.

An elevated CA 19-9 test by itself is not used to make the diagnosis of pancreatic cancer, as it can be elevated in a variety of other conditions, such as pancreatitis or cirrhosis of the liver, and some people

醫生可能會進行以下測試為胰腺癌作診斷。

病史及體格檢查

為了作出明確診斷，可能需要進行一系列測試。你的醫生會先詢問你的病史和身體是否有任何疾病或症狀，尤其是最近是否消瘦，疼痛，食慾、排便習慣和結構或皮膚顏色有否改變。醫生會再作一個徹底的身體檢查，其中包括觸診和觀察胸部和腹部。

實驗室測試

醫生會收集血液樣本，雖然較少見，也會收集尿液或糞便樣本。醫生特別感興趣的是患者的血液中的“膽紅素”和“肝酶”，用來測量肝臟和胰腺功能的水平。

另一種常見的血液測試是 CA19-9（醣類抗原 19-9）。CA19-9 稱為“腫瘤標誌物”，這是身體內的化學物質，如果身體內有癌症，血液含有這物資的水平會較高。

升高的 CA19-9 測試本身不會用於胰腺癌的診斷，因為它可以因為其他原因而升高，如胰腺炎或肝硬化，而有些胰腺癌患者甚至不顯示

with pancreatic cancer do not show this marker at all.

CA 19-9 can be used as a tool, however, to help evaluate the effectiveness of a cancer therapy by comparing the levels before and during treatment.

Additional Diagnostic Tests

The following tests may also be conducted to make a definite diagnosis:

- **Ultrasound** — Ultrasound uses a machine that emits high-frequency sound waves to create images of the organs inside the body. An abdominal ultrasound examines the liver, gallbladder, spleen, pancreas and kidneys, and can help identify abnormal structures or tissue.
- **Computed Tomography (CT) Scan** — This is a non-invasive method of examining internal organs that captures a series of thin X-ray images of the inside of the body. CT scans can help detect tumors and determine whether it has spread to other parts of the body, such as the liver.

There are different types of CT scans and special techniques that can be done to create more detailed images of the pancreas. At UCSF, we offer a three-dimensional CT scan, often referred to as a "spiral" or "helical" scan, which creates extremely detailed images of the pancreas and nearby blood vessels and structures to help determine

這個標記。

通過比較治療前和治療期間的 CA19-9 水平，CA19-9 可作為一種工具協助評估癌症治療的有效性。

其他診斷測試

以下的測試也作出明確診斷：

- **超聲波** - 超聲波使用一台發出高頻聲波的機器為體內器官的繪畫圖像。腹部超聲波檢查肝，膽，脾，胰，腎，以及可以幫助識別異常結構或組織。
- **電腦斷層掃描 (CT) 掃描** - 這是一個非入侵性的內部器官檢查方法，拍攝一系列的身體內部的薄的 X 射線圖像。CT 掃描可以幫助檢測腫瘤並確定它是否已經擴散到身體的其他部位，如肝。

CT 掃描有不同類型和特殊技術，可以創建更詳細的胰腺的圖像。於 UCSF，我們提供了一個三維立體 CT 掃描，通常被稱為一個“螺旋式”或“螺旋”掃描，顯示胰腺和附近的血管和結構的極為細緻圖像，用以幫助確定治療

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| <p>treatment decisions.</p> <ul style="list-style-type: none"> • Endoscopic Ultrasound (EUS) — This is a procedure that allows a specially trained doctor, typically a gastroenterologist, to view the esophagus, stomach and the first portion of the small intestine, as well as adjacent organs including the liver and pancreas. <p>While the patient sleeps, a thin, flexible tube called an endoscope is passed through the mouth into the stomach and small intestine. On the end of the tube is an ultrasound probe that emits sound waves that create images of the abdominal organs.</p> <p>If unusual masses are detected, the doctor may collect a specimen of tissue at the time of the procedure during a <u>biopsy</u>. The use of EUS can decrease the likelihood that a patient will need to go to the operating room for surgery.</p> <ul style="list-style-type: none"> • Endoscopic Retrograde <p>Cholangiopancreatography (ERCP) — This procedure uses an endoscope — a long, flexible, lighted tube connected to a computer and TV monitor. Your doctor will guide the endoscope through your stomach and into the small intestine. ERCP combines two imaging techniques: "endoscopy," the direct visualization of internal structures and "fluoroscopy," a live action X-ray method. These two</p> | <p>決策。</p> <ul style="list-style-type: none"> • 內鏡超聲檢查 (EUS) — 這個檢查要由一個經過專門訓練的醫生負責，通常是腸胃病專科醫生，透過這檢查可以查看食管，胃和小腸中的第一部分，以及鄰近的器官包括肝和胰腺。 <p>患者接受麻醉後，醫生將一支薄而柔軟的管，稱為內窺鏡，經患者口腔送入胃中和小腸，管的頂端安裝了超聲波探頭，並發射聲波為腹部器官繪製圖像。</p> <p>如果檢測到不尋常的物質，醫生會即時進行活組織切片檢查收集組織樣本。使用 EUS 能降低病人需要進入手術室動手術的可能性。</p> <ul style="list-style-type: none"> • 內窺鏡逆行 <p>胰膽管造影(ERCP) - 這程序採用內窺鏡 - 一支長長、靈活、發光的管連接到電腦和顯示屏。醫生會引導內窺鏡通過你的胃然後進入小腸。ERCP 結合了兩種影像技術：“內窺鏡檢查” - 直接看見內部結構，和“透視” - 即時 X 光處理法。這兩種技術容許醫</p> |
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techniques allow the doctor to view images of the liver, gall bladder and pancreas ducts, which can help detect a narrowed or blocked duct.

Further tests, such as a biopsy, can pinpoint the cause of a narrowed or blocked duct. If a duct is narrowed or blocked by a tumor, a plastic or metallic stent can be placed across the blockage. The stent is designed to expand and reopen the duct to allow bile juices to flow freely.

- Magnetic Resonance

Cholangiopancreatography (MRCP) — MRCP uses radio waves and a powerful magnet linked to a computer to visualize the biliary and pancreatic ducts in a non-invasive manner. These pictures can show the difference between normal and diseased tissue and can also detect bile duct obstruction.

MRCP may be performed in patients who cannot have an endoscopic retrograde cholangiopancreatography (ERCP) or may also prevent unnecessary invasive procedures.

- Biopsy— A biopsy allows a doctor to collect a small amount of tissue. A pathologist then uses a microscope to examine the tissue and identify the types of cells collected.

生查看肝、膽囊和胰腺導管的影像，可以查出導管狹窄或阻塞的情況。

進一步的測試，例如活檢，可以查明導管狹窄或阻塞的原因。如果是腫瘤令導管狹窄或阻塞，醫生會在阻塞處放置塑料或金屬支架，目的是擴大和重新打開通道，使膽汁自由流動。

- 磁力共振

胰膽管造影術(MRCP) — MRCP 使用無線電波和一個強力磁鐵連接到電腦，以非入侵性方法審視膽道和胰腺導管。這些照片可以顯示正常組織和病變組織之間的差異，還可以檢測膽管梗阻。

患者如果不適合進行內窺鏡逆行胰膽管造影(ERCP)，可選擇使用 MRCP，這或可以防止進行不必要的入侵性手術。

- 活組織切片檢查(活檢)
活檢允許醫生收集少量組織。然後病理學家用顯微鏡來檢查組織，並確定所收集的細胞的類型。

Tissue can be collected at the time of an endoscopic ultrasound or endoscopic retrograde cholangiopancreatography. A biopsy also can be performed under guidance of a CT scan. If necessary, a biopsy can be performed at the time of open surgery of the abdomen.

There are two methods frequently used to collect tissue for a biopsy. A fine needle aspiration (FNA) utilizes a very narrow needle. A core needle biopsy uses a larger needle. Both methods have advantages and risks.

If cancer is suspected to have spread, or metastasized, it is preferable to biopsy the tumor than the pancreas itself. A specially trained doctor will determine the best method to use. It is also important to note that if all of your other test results suggest cancer, you may not need a biopsy before you have treatment.

Staging

If you are diagnosed with pancreatic cancer, your doctor will evaluate the stage or extent of your disease. Staging is a careful attempt to determine the size and location of the cancer and whether it has spread to other parts of the body.

The stage of a cancer is a description of the extent of a cancer at a specific point in

於進行超聲內鏡或內鏡逆行胰膽管造影時可以收集活檢組織，亦可於 CT 掃描時收集。如有需要，活檢可以在開腹手術進行時做。

通常有兩種方法用來收集活檢組織，細針抽吸(FNA)利用很窄的針，而核心穿刺活檢則用較粗的針。這兩種方法各有優點和風險。

如果懷疑癌症已經擴散，或轉移，應先選擇為腫瘤進行活檢，其次才到胰臟本身。受過專業訓練的醫生會決定選用最佳的方法，值得注意的是雖然你所有檢查結果顯示你患上癌症，你在治療前亦未必需要活檢。

分期

如果你確診患有胰腺癌，醫生會評估您的病情階段或程度。分期是一個精心的嘗試以確定所述癌症的大小和位置，以及是否已經擴散到身體的其他部位。

癌症的分期是說明在特定時間點癌症的嚴重程度。這些信息有助醫生

time. This information helps your doctor develop the best and most effective treatment plan for your condition. The stage may be determined at the time of diagnosis or after more tests are performed.

There are two forms of a staging system for cancer:

- Clinical staging involves a doctor's exam and imaging tests such as a computed tomography (CT) scan.
- Pathologic staging depends on findings from surgery. However, most patients with pancreatic cancer do not have surgery. Doctors will develop a treatment plan according to the extent of disease.

Stages of Pancreatic Cancer

- Localized and Resectable — The cancer is confined to the pancreas and is resectable, meaning that in most cases, it can be surgically removed. After surgical removal, most patients receive additional treatment such as cancer drugs or radiation therapy.
- Locally Advanced and Unresectable — When cancer cannot be removed entirely by surgery, it is termed unresectable. Although the cancer has not yet spread to distant organs, the involvement of local structures, usually major blood vessels, make surgical removal technically impossible.

In some cases, surgery might be done to relieve symptoms or problems caused

為你制定最佳和最有效的治療方案。在診斷時或經過多個檢驗後便可確定癌症所屬分期。

癌症有兩個分期系統：

- 臨床分期牽涉到醫生的檢查和影像學檢查，如電腦斷層掃描（CT）掃描。
- 病理分期取決於手術的結果。然而，大多數胰腺癌患者不必進行手術。醫生會根據疾病的程度制定治療計劃。

胰腺癌的階段

- 局部性和可切除 – 癌症僅限於胰腺和是可以切除的，這意味著在大多數情況下，它可以通過手術移除。手術切除後，大多數患者接受進一步的治療，如抗癌藥物或放射治療。
- 局部晚期和不可切除 – 當癌症不能完全由外科手術切除，稱為不可切除。雖然癌症尚未擴散到遠處器官，癌症發生所在地的結構，通常是主要的血管，令手術切除技術上不可行。

在某些情況下，可能會進行外科手術以減輕癌症引起的症狀或問

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| <p>by the cancer. Treatment generally includes drugs and sometimes radiation.</p> <ul style="list-style-type: none"> • Metastatic — The cancer has spread to distant organs. In this case, surgery might be done to relieve symptoms or problems caused by the cancer. More often, drug therapy is used. | <p>題。治療通常包括藥物，有時放射治療。</p> <ul style="list-style-type: none"> •轉移 - 癌症已經擴散到遠處器官。在這種情況下，手術可能會做，以減輕癌症引起的症狀或問題。藥物療法更經常使用。 |
| <p>Treatment</p> <p>There are different treatments available for patients with pancreatic cancer, including surgery, radiation therapy and drug therapy. Your doctor will use the following criteria to develop a treatment plan:</p> <ul style="list-style-type: none"> • Your overall health and well being and preferences regarding treatment • Whether or not the cancer can be removed by surgery • Whether the cancer has just been diagnosed or has recurred, which means that it has come back <p>Surgery</p> <p>About 15 percent to 20 percent of patients with pancreatic cancer are diagnosed early enough that their tumor can be removed surgically. Typically, however, only smaller tumors are surgically removed and even then, cancer often returns.</p> <p>Pancreatic cancer surgery is a complex procedure. Studies have found that patients do better overall when their surgery is performed at a medical center with a high volume of these surgical</p> | <p>治療</p> <p>有幾種不同的方法可用於治療胰腺癌患者，包括外科手術，放射療法和藥物療法。您的醫生會用以下標準來制定治療計劃：</p> <ul style="list-style-type: none"> • 治療對你整體健康、福祉和喜好的關連 • 癌症是否可以通過手術去除 • 癌症是否已經確診或復發 <p>手術</p> <p>約 15% 至 20% 的胰腺癌患者能夠於很早期診斷出患病，並通過手術將腫瘤移除。然而，通常只有較細小的腫瘤可以用手術切除，即使這樣，癌症往往會復發。</p> <p>胰腺癌手術是一個複雜的過程。研究發現，若患者在一個曾大量處理這些手術的醫療中心進行手術，他會表現更好。雖然大量的定義很難</p> |

procedures. Although the definition of high volume varies by study, UCSF surgeons perform major pancreatic surgeries at a rate well above that which is considered high volume. We are among the most experienced and successful in performing this exacting surgery to treat pancreatic cancer.

Surgery may be performed to remove all or part of the pancreas and nearby tissue. Surgery is also used to try to minimize the complications caused by pancreatic cancer. The kind of surgery recommended depends on your type of cancer, location of the tumor, your symptoms, whether the cancer involves other organs and whether the cancer can be completely removed. It is important to note that even after having surgery, the cancer often recurs.

If imaging studies show that all of your tumor may be potentially removed, one of the following procedures may be performed:

- Whipple Procedure (Pancreaticoduodenectomy) — This is the most commonly performed surgery used to remove tumors of the pancreas. The surgeon removes the head of the pancreas, and sometimes the body of the pancreas. The bottom section of the stomach, parts of the small intestine, gallbladder, a portion of the bile duct and lymph nodes near the pancreas are also removed. The remaining tail of the pancreas and bile duct is reattached to the small intestine so that bile from the liver can flow into the small intestine.

介定，UCSF 的外科醫生處理大多數的胰腺癌外科手術，數量高於公認的大量。我們是最有經驗和成功進行這項嚴格的手術來治療胰腺癌。

利用外科手術可以切除所有或部分胰腺和它附近的組織。亦可用手術來盡量減少胰腺癌的併發症。手術種類的建議取決於你的癌症種類，腫瘤位置，你的症狀，癌細胞是否涉及其他器官和癌細胞是否可以完全移除。需要注意的是，癌症經常在施行手術後復發，這一點是十分重要的。

如果影像學檢查顯示，腫瘤都已經盡可能全部切除，你可以選擇下面其中一個的步驟處理：

- 惠普爾程序（胰十二指腸切除術） - 這是一個用來去除胰腺腫瘤最常進行的手術。外科醫生切除胰腺的頭，有時胰腺的身體。在胃的底部部分，小腸，膽囊的部件，鄰近胰腺膽管和淋巴結的一部分也被除去。胰腺和膽管的殘餘末尾重新附加到小腸，以便從肝臟膽汁能夠流入小腸。

- **Distal Pancreatectomy** — The surgeon removes the body and the tail of the pancreas. The spleen is also often removed.

- **Total Pancreatectomy** — In this procedure, the entire pancreas, duodenum, bile duct, gallbladder, spleen and nearby lymph nodes are removed.

While a total pancreatectomy is usually effective in removing the cancer, it induces permanent diabetes, requiring patients to take insulin shots or use an insulin pump for the rest of their lives. This is because the pancreas contains Islets of Langerhans, also known as islets or islet cells, which secrete insulin to regulate the body's blood sugar levels. In some cases, the cancer cannot be completely removed and other surgeries and procedures can be considered to alleviate symptoms.

- **Biliary Bypass** — This surgery is performed if cancer blocks the free flow of bile juice through the bile ducts. This obstruction can cause pain, infection, digestive problems and jaundice, a yellowing of the eyes and skin. Biliary bypass involves rerouting the flow of bile from the common bile duct directly into the small intestine, bypassing the pancreas.
- **Biliary Stent** — This procedure may be performed if cancer blocks the flow of bile in the bile ducts. It involves placing a stent — a small thin plastic or metal tube — to help keep the bile duct open. A biliary stent can be placed either

- **遠端胰腺** – 外科醫生移除體和胰尾。脾通常會被切除。

- **全胰臟切除** – 在此過程中，整個胰腺，十二指腸，膽管，膽囊，脾臟和附近的淋巴結全部被切除。

雖然全胰臟切除術通常是有效去除癌症，但會導致永久性糖尿病，患者從此終生需要注射胰島素或使用胰島素泵。因為胰腺含有胰島，也被稱為胰島或胰島細胞，它分泌的胰島素是用來調節體內的血糖水平。有些個案，外科手術不能完全除去癌症，便要考慮用其它治療去減輕症狀。

- **膽道繞路** – 如果癌症阻塞膽管令膽汁不能自由流動，便要進行這手術。這種阻塞可以導致疼痛，感染，消化問題和黃疸，即眼睛和皮膚泛黃。膽道旁路涉及改變膽汁的路徑，膽汁繞過胰腺從總膽管流直接進入小腸。

- **膽道支架** – 如果癌症阻礙膽管內的膽汁流動，便進行這手術。醫生將一個支架放入，支架是小而薄的塑料或金屬管，幫助保持膽管張開。放置膽道支架可以在進

during an endoscopic retrograde cholangiopancreatography (ERCP) or via a route through the skin, into the liver or common bile duct. The stents may be changed or cleared periodically due to buildup from the bile.

- **Gastroduodenal Stent** — Pancreatic tumors may cause an obstruction of the gastric tract, particularly within the duodenum, a part of the small intestine. Symptoms associated with obstruction are severe nausea, vomiting, malnutrition and dehydration. Gastroduodenal stent placement is a minimally invasive technique that can help relieve such symptoms and improve one's quality of life. The procedure is performed in similar fashion to that of the biliary stent described above.
- **Gastric Bypass** — In some cases, the duodenum — the first part of the small intestine — may be blocked by the tumor, causing pain, vomiting and digestive problems. Gastric bypass may be performed to reroute the stomach connection to the duodenum to alleviate symptoms and to allow patients to eat normally.
- **Celiac Plexus Block** — Sometimes a celiac plexus block (CPB) or celiac plexus neurolysis (CPN) is performed for pain control. This procedure blocks a group of nerves in the abdomen called the celiac plexus, which can deliver sensations of pain from the abdomen to

行內鏡逆行胰膽管造影 (ERCP) 手術時進行，或通過皮膚進入肝臟或總膽管。由於膽汁堆積，所述支架可能需要更換或週期性地清除。

- **胃十二指腸支架** - 胰腺腫瘤可以導致胃道的阻塞，特別是十二指腸，十二指腸是小腸的一部分。與梗阻相關症狀包括嚴重的噁心，嘔吐，營養不良和脫水。胃十二指腸支架置入術是一種微創技術，它可以幫助減輕以上症狀，提高一個人的生活品質。放置這支架的方法類似前述的膽管支架的方法。
- **胃繞路** - 十二指腸屬小腸的第一部分，在某些情況下，腫瘤可能阻塞十二指腸，因而引起疼痛，嘔吐和消化問題。利用胃繞路術，將胃繞過新路徑重新連接到十二指腸，以減輕症狀，令患者正常進食。
- **腹腔神經叢阻滯** - 有時為了控制疼痛，便要進行腹腔神經叢阻滯 (CPB) 或腹腔神經叢神經松解術 (CPN) 。做法是阻塞腹部的一組稱為腹腔神經叢的神經叢，這組神經叢能將疼痛感覺從腹部

the brain.

- CPN involves the injection of an agent, usually alcohol, to permanently destruct nerves. CPB involves the injection of medications such as corticosteroids and numbing medications. This approach usually lasts a few months and is not intended to permanently destroy nerves.

Radiation Therapy

Radiation therapy is the use of X-rays or high-energy rays to kill cancer cells and shrink tumors. Radiation is typically delivered by a machine outside the body, called external radiation therapy. Less common, experimental approaches use materials called radioisotopes delivered inside the body through intravenous or local injection.

The use of radiation therapy depends on a number of factors including tumor location, size, organ involvement and previous treatments. Radiation can be used alone or in addition to surgery and chemotherapy. Newer approaches, such as stereotactic radiosurgery with a machine called a CyberKnife are also being explored.

Cancer Drug Therapy

Cancer drugs may be taken by mouth as a pill or may be put into the body by a needle in the vein. Cancer drugs are a

傳遞到大腦。

- CPN 涉及注射藥劑，通常是酒精，達到永久破壞神經綫。CPB 涉及注射藥物，如皮質類固醇和麻醉藥物，這種方法的效力通常僅持續幾個月，並且不打算永久破壞神經綫。

放射治療

放射治療是利用 X 射線或高能射線來殺死癌細胞和縮小腫瘤。通常通過一台機器從身體外輸送輻射入體內，稱為外部放射治療。較少見的實驗方法是使用稱為放射性同位素的材料，通過靜脈或局部注射傳送入身體內部。

使用放射治療取決於許多因素，包括腫瘤的位置，大小，所涉及的器官和以前曾接受何種治療等等。輻射可以單獨使用，或者加上手術和化療一起使用。較新的方法，如用一台機器名為射波刀的立體定向放射外科術，此方法尚探索研究之中。

癌症藥物治療

癌症藥物可以是口服的藥片，或者透過靜脈注射入體內。癌症藥物是一種系統性治療，這意味著它們進

systemic treatment, which means that they enter the bloodstream and travel throughout the body. They attempt to wipe out any cancer cells after surgery or to control disease when surgery is not feasible.

These medications are sometimes taken at the same time as radiation therapy to try to achieve a better result. Drug therapy aims to control cancer, prevent complications and help people live longer and feel better.

Sometimes newer cancer drugs are referred to as targeted therapy. Targeted therapy is a general term that typically refers to a new class of drugs or agents that are designed to target specific parts or pathways that regulate cancer cell growth. In addition, doctors hope that targeted therapies will be less likely to cause unpleasant side effects by minimizing damage to normal cells. This is an area of research that is ever-growing; our pancreatic scientists and doctors are increasingly involved in research studies and clinical trials developing targeted therapies.

Clinical Trials

UCSF researchers are at the forefront of studying new therapies for pancreatic cancer. Patients may participate in clinical trials to test new therapies for pancreatic cancer. Clinical trials are experiments designed to improve existing treatment or to test the safety and effectiveness of new treatments.

入血液和運行到整個身體。手術後會用藥物試圖消滅所有的癌細胞，或當不能進行外科手術時用藥物來控制疾病。

這些藥物有時會與放射治療一同採用以求獲得更好的效果。藥物治療的目的是控制癌症，防止併發症的發生，和幫助人們活得更長，生活得更好。

新的抗癌藥物有時稱為標靶治療。標靶治療是一個統稱，通常是指一些新種類的藥物或試劑，它們的研發是針對特定部份或路徑，目的調控癌細胞的生長。另外，醫生希望標靶療法對正常細胞的損害能夠縮減至最少，從而將導致令人不快的副作用盡量減少。從事這方面的研究正在不斷增加；我國胰腺癌的科學家和醫生越來越多參與這方面的研究工作，並制定標靶治療的臨床試驗。

臨床試驗

UCSF 的研究人員都在研究治療胰腺癌新方法的最前端。患者可參加臨床試驗，以測試胰腺癌治療的新方法。臨床試驗的目的是改善現有的治療或測試新治療方法的安全性和有效性試驗。

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| <p>Participation in a clinical trial is voluntary. Prior to enrollment in a clinical trial, patients are given a document called a consent form that explains the goals of the trial, the therapy to be used, risks and benefits and any associated costs, if applicable. There are a number of mechanisms in place, both legal and ethical, to protect the rights and safety of clinical trial volunteers.</p> <p>Clinical trials can allow patients access to newer, unproven treatments. They also allow doctor and researchers access to data collected from clinical trial volunteers. Clinical trials will lead to better cancer treatments..</p> | <p>臨床試驗是自願參加的。在辦理臨床試驗登記前，患者會收到一份知情同意書，詳細解釋試驗的目標的，所用的治療，風險和好處，及任何相關費用（如適用）。現時已有許多機制存在，從法律和倫理兩方面，保護自願參與臨床試驗的參加者的權利和安全。</p> <p>臨床試驗可以讓患者獲得較新但未經證實的治療方法。它們還允許醫生和研究人員取用向參與臨床試驗的志願者收集得來的數據。臨床試驗將導致更好的癌症治療方法。</p> |
| <p>Pancreatic Cancer Symptom Management</p> <p>Pancreatic cancer is often accompanied by one or more unpleasant symptoms. One of the goals of cancer therapies is to resolve or lessen the severity of these symptoms. Unfortunately, cancer treatments themselves may also cause symptoms.</p> <p>Cancer patients often experience a range of symptoms, varying in severity. These include pain, fatigue, poor appetite, nausea and vomiting. It is important to discuss any symptoms with your doctor or nurse so management strategies can be discussed, and if needed, medications prescribed to control the severity of symptoms.</p> | <p>胰腺癌症狀的處理</p> <p>胰腺癌常會有一或多種不適的症狀；消除或減輕這些症狀的嚴重程度是治療目的之一。令人遺憾的是，治療癌症本身也可能產生症狀。</p> <p>癌症患者通常承受着一系列的症狀，其嚴重程度有所不同。這些症狀包括疼痛、疲勞、食慾不振、噁心和嘔吐。若有任何症狀出現，最重要是與你的醫生或護士商討，從而設計處理症狀的策略，如有需要，也可處方藥物來控制症狀的嚴重程度。</p> |

Pain

Pancreatic cancer can often cause abdominal and back pain. The pancreas lies within an area of the abdomen crisscrossed with nerves and blood vessels. You may experience pain when the cancer presses upon these nerves or other organs.

There are several methods available to treat and manage pain. These include pain medications (opioid and non-opioid), radiation, surgery and forms of nerve block, including celiac plexus block (CPB) or celiac plexus neurolysis (CPN). Some patients choose to supplement these methods with alternative or complementary therapies such as acupuncture, biofeedback, guided imagery and relaxation techniques.

- Celiac plexus block (CPB) and celiac plexus neurolysis (CPN) — These procedures block a group of nerves in the abdomen called the celiac plexus, which can deliver sensations of pain from the abdomen to the brain. CPN involves the injection of an agent, usually alcohol, to permanently destroy nerves. CPB involves the injection of medications such as corticosteroids and numbing medications. This approach usually only lasts a few months and is not intended to permanently destroy nerves.

There are different approaches for performing celiac plexus block or neurolysis. CPB and CPN can be performed percutaneously, using a needle that is inserted through the skin

疼痛

胰腺癌經常引起腹部和背部疼痛，胰腺位於腹部一區域，這裡滿佈縱橫交錯的神經綫和血管。當癌瘤擠壓這些神經綫或其他器官，患者便會感到疼痛。

有幾種方法可以治理疼痛，包括止痛藥物(阿片類和非阿片類)，放射療法，外科手術，神經阻滯方法包括腹腔神經叢阻滯(CPB)或腹腔神經叢的神經松解術(CPN)。有些病人選擇以其他方法作補充治療，例如：針灸治療、生物反饋、意象指導和舒緩技巧等

- 腹腔神經叢阻滯(CPB)和腹腔神經叢神經松解術(CPN) — 做法是阻塞腹部的一組稱為腹腔神經叢的神經綫，這組神經叢能將疼痛感覺從腹部傳遞到大腦。CPN 涉及注射藥劑，通常是酒精，達到永久破壞神經綫。CPB 涉及注射藥物，如皮質類固醇和麻醉藥物，這種方法的效力通常僅持續幾個月，並且不打算永久破壞神經綫。

施行腹腔神經叢阻滯(CPB)或腹腔神經叢神經松解術(CPN)有不同的

and guided into position using imaging techniques such as computed tomography (CT) or endoscopic ultrasound (EUS). Or, a needle can be advanced into the celiac plexus region using an endoscope with ultrasound guidance, and either alcohol or numbing agents with corticosteroids can be injected.

- Radio frequency ablation (RFA) — RFA is one of the newest techniques being used for pain control. During RFA, radiofrequency waves are delivered down a needle to generate just enough heat to destroy the nerves. It is not yet known which is the best way to perform a nerve block.

Your doctor will discuss whether this is an appropriate option for you, and will refer you to one of our pain specialists in this area. It is important to note that these procedures do not provide relief for everyone, but most patients will have a reduction in their pain.

Abdominal Symptoms and Nutrition

For a variety of reasons pancreas cancer can lead to unintentional weight loss. Sometimes this is due to stomach symptoms such as fullness, gas, belching, diarrhea, and commonly, constipation. Patients often describe a loss of appetite, food aversions, nausea and vomiting. These stomach and intestinal symptoms can be caused by the cancer itself or by

方法。CPB 和 CPN 能用針經皮膚施行，將針插穿皮膚並用影像技術，如電腦 X 綫體層照相術或內窺鏡聲波指導移動針直達確定部位，或者用超聲波協助內窺鏡引導針向前移動至腹腔神經叢區，或者注射加入酒精或麻醉藥的皮質類固醇。

- 射頻切除(RFA) – RFA 是一種用以控制疼痛的最新技術，當進行射頻切除術時，射頻波傳送到針並產生足夠破壞神經叢的熱量，用這種方法施行神經叢阻滯是否最好還未有定論。

- 你的醫生會和你商議這是否最適合你的方法，並轉介你到這區域的疼痛專家就診。值的注意的是，這些方法並非能夠舒解每個人的痛症，但大部分病人可以減輕痛楚程度。

腹部症狀和營養

胰腺癌因種種原因會導至非蓄意的體重減輕，有時這是由於胃部症狀所引起，例如：飽漲感、腸胃漲氣、噯氣、腹瀉及較普遍是便秘。患者常訴說食慾不振、厭食、噁心和嘔吐，這些腸胃症狀可能由癌症本身或由癌症藥物所致。

the treatments prescribed to treat the cancer.

The best approach for finding effective ways to manage these symptoms is to discuss them with your doctor or nurses. There are many methods and resources available to help improve these symptoms.

Pancreatic Enzymes

Pancreatic enzymes are used to improve digestion of foods and prevent symptoms such as frequent, fatty bowel movements. These can occur in patients with a blockage between the pancreas and the intestine, or who have had surgery to remove all or part of the pancreas. Pancreatic enzymes are given to replace the natural substances normally made by the pancreas. These enzymes break down proteins, fats and starches from food into smaller substances to help absorption by the intestine. This allows the body to use these substances for energy.

Some patients may not need any pancreatic enzymes, while others may need a large amount to relieve their symptoms. The enzymes are taken by mouth, usually with food and water, several times a day — often with every meal or snack. The number of times per day that you take pancreatic enzymes depends on your condition and on how well you respond to treatment. Your doctor will prescribe the number of pills and how often to take them. Most likely, you will start on a low dose and gradually increase it depending on your response to treatment and diet.

最好是與你的醫生或護士商議如何最有效處理這些症狀的方案，有許多方法和對策可用以治療改善這些症狀。

胰酶

胰酶常用以改善食物消化和預防症狀如頻繁和脂肪排便，這些可能發生在患者曾有胰腺和腸阻塞、或者曾經接受外科手術切除全部或部分胰腺。胰酶代替由胰腺製造的正常天然物質，這種酶可以將食物中的蛋白質、脂肪和澱粉質分解為較細小物質，有助腸道吸收，身體能夠使用這些物質作為能量。

有些患者可能不需要胰酶，而有些可能需要大量胰酶舒解他們的症狀，胰酶通常是口服的，每天幾次與食物和水一起服用，通常每餐膳食或小吃時一同服用，每天需要服用的次數要跟據你的病情和你對治療的反應而定，醫生會處方所需要的數量和說明如何服用。患者最大可能由低劑量開始服用，然後跟據治療和飲食的效應逐步增加。

Pancreatic enzymes may control symptoms but cannot cure the condition. You should continue to take pancreatic enzymes even if you feel well.

Fatigue

Fatigue is an extremely common symptom of cancer and cancer treatments. Feelings of fatigue can range from tiredness to exhaustion, can vary in frequency and often have multiple causes. It is important to tell your health care providers about your fatigue. There are many resources available to help you cope and conserve your energy.

Coping and Depression

Everyone who is diagnosed with cancer will react differently and will experience varying levels of stress and emotional upset throughout their cancer care. These symptoms and fears usually lessen as a person adjusts to the diagnosis.

Not all persons with cancer experience depression. The cause of depression is unknown. Risk factors may or may not be cancer-related, and some people with cancer may have a higher risk for developing depression.

The symptoms of major depression include:

胰酶可以控制症狀但不可以完全治愈疾病，即使患者覺得情況好轉，仍須繼續服食胰酶。

疲勞

疲勞是癌症和治療癌症最常見的徵狀。疲勞的感覺可以由疲倦至感覺疲憊不堪不等，出現的頻率亦有差異，通常由多種原因引起。與醫護人員溝通說明疲勞的情況是非常重要的，有許多辦法可以幫助患者處理疲勞的問題，並協助他們保存能量。

妥善處理和抑鬱症

每個人對確診患上癌症會有不同反應，而且於治療期間會有不同程度的緊張和情緒波動。當患者適應了診斷，這些症狀和恐懼通常會減少。

並非所有癌症病人都會有抑鬱，引發抑鬱症的原因尚未知道，與癌症相關聯的風險可能有亦可能沒有，但有些癌症患者可能有較高風險患上抑鬱症。

抑鬱症的主要症狀包括：

- A depressed mood on most days
- Loss of interest or pleasure in most daily activities
- Changes in sleeping habits
- Nervousness
- Sluggishness
- Poor concentration
- Constant thoughts of death or suicide

At times, these symptoms are due to a medical condition.

Major depression may be treated with a combination of counseling and medications. Several therapies are helpful in the treatment of cancer-related depression. Most therapy programs are offered in either individual or group settings and include support groups, cancer education and classes on relaxation skills, coping, yoga and meditation. Some patients seek counseling from someone who understands life-threatening illnesses, such as a medical social worker, psychologist or chaplain. Patients without obvious symptoms of depression may also benefit from counseling.

Reviewed by health care specialists at UCSF Medical Center. **This information is for educational purposes only and is not intended to replace the advice of your doctor or health care provider. We encourage you to discuss with your doctor any questions or concerns you may have.**

- 大部分時間情緒消沈
- 對日常生活的興趣和活動不感興趣
- 改變睡眠習慣
- 神經緊張
- 呆滯
- 精神不集中
- 經常想死或自殺

有時，這些症狀與醫療狀況有關。

大多數抑鬱症可以用心理輔導和藥物聯合診治，與癌症有關的抑鬱症可以有幾種治療方案，多數的治療可分個別或小組形式，包括支援小組、癌症教育、放鬆技巧班、妥善處理班、瑜珈班和治療課程。有些患者尋求對威脅生命的疾病有認識的人指導，例如醫療社會工作者、心理學家、或者神職人員。患者沒有抑鬱症症狀的都可以透過心理輔導得到益處。

由 UCSF 醫療中心保健專業人員綜述

本資料僅為教育目的，並沒有打算代替你的醫生或保健人員的意見，我們鼓勵你與你的醫生商討各種問題或與你有關的事項。