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Vitiligo Questions & Answers

The Vitiligo Research Foundation Handbook for answering the most common questions on Vitiligo

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Vitiligo
Questions and Answers

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白癜风
问与答

Vitiligo. Questions and Answers. Part 1 by Prof. Torello Lotti, MD	第一部分 编者 Torello Lotti 教授 ,医学博士
Question 1. What is vitiligo?	问题 1. 什么是白癜风?
Key points	要点
•Vitiligo is a pigmentary disorder resulting in typically asymptomatic white macules that can appear at any time during human life and can be psychologically devastating.	•典型白癜风是一种表现为无症状白斑的色素性疾病，可出现于一生中的任何时间/发生于任何年龄，并给患者带来心理上的严重打击。
•It occurs in all skin types and at all ages, with equal frequencies between men and women.	•它可发生于所有皮肤类型和各个年龄段，男女发病率相同。
•Vitiligo is considered to be an autoimmune disease with an underlying genetic predisposition in the majority of cases.	•白癜风被认为是一种自身免疫性疾病，在大多数病例中有潜在的遗传倾向。
•Vitiligo is not caused by poor medical care.	•白癜风不是由不良医疗条件/护理引起的。
•Personal behavior or state of mind may play an important role in the disease management.	•个人的行为或心态在疾病治疗中可能发挥重要作用。
•Vitiligo is never a contagious disease, but infective agents may apparently play an indirect role in some cases.	•白癜风并不是传染性疾病，但有时候感染因素可能明显地发挥间接作用。
Vitiligo is not related to bad diet, but correct diet may help.	•白癜风与不良饮食无关，但良好的饮食可能对此病有所帮助。
•Vitiligo seems not to be directly related to pollution, but the environment plays a major role in vitiligo development.	•白癜风似乎与污染没有直接关系，但环境在白癜风发展中起着主要作用。
•Vitiligo is not clearly genetically transmitted.	•白癜风的基因遗传特性尚不明确。

•Progression of the disease can be halted in about 90% of cases, if treatment is sought.	•若患者寻求治疗，约 90%的病例可控制
A cure is not yet known for each and every case, but adequate medical and /or surgical therapies may treat satisfactorily over 75% of the affected subjects.	并非所有患者都能治愈，但是, 充分的内科和/或外科疗法可使超过 75%的患者达到满意的治疗效果。
•Be optimistic! It is not true that there is nothing that can be done for vitiligo. In fact, just the opposite is true and research is happening all over the world to find the cure for vitiligo.	•要乐观!对白癜风束手无策是不正确的。事实上，正好相反，世界各地都在探索白癜风的治愈方法。
Answer	回答
Vitiligo is an acquired sudden loss of the inherited skin color. Despite its long recognition, the cause of this disorder is still unknown. The loss of skin color yields white patches of various sizes, which can be localized anywhere on the body. The disease affects people of all races, men and women, and all age groups. It may appear at any age; cases have been reported as early as 6 weeks after birth and after 80 years of age.	白癜风是一种获得性的原本肤色缺失的疾病。尽管对它的认知由来已久，但仍不清楚其病因。皮肤颜色的缺失产生大小不一的白色斑片，并可发生于身体的任何部位。任何种族、性别和年龄者均可发病。它可会出现在任何年龄段：曾有病例报道出生后 6 周的婴儿和 80 多岁的老人均有发病者。
Vitiligo is not a contagious disease, however is is a difficult condition to tolerate, being more often a psychologically devastating disease, especially in darker skinned individuals, in whom it is more easily noticeable. The actual cause of vitiligo is under debate and has been attributed to autoimmune causes, oxidative stress, and/or a neurogenic disturbance. These terms will be explained later on.	白癜风并不是传染性疾病，但却令人很难接受，它常常给患者心理造成严重打击，尤其是白癜风白斑与肤色形成鲜明颜色反差的肤色较深的患者。白癜风的真正病因仍存在争议，目前认为与自身免疫、氧化应激和/或神经源性紊乱有关。这些术语稍后解释。
In other terms, vitiligo is a skin and/or mucosal disorder characterized by white patches, often, but not always, symmetrical, which usually increase in size with time, corresponding to a substantial loss of functioning epidermal and sometimes hair follicle melanocytes. It may occur in a unilateral distribution or may be generalized.	换句话来说，白癜风是以皮肤和/或粘膜白斑为特征的疾病，通常对称分布且常逐渐变大，与此对应的是表皮或毛囊的黑素细胞的实质性功能缺失。它可发生于单侧也可能广泛分布。

Vitiligo lesions may rarely itch and have a high propensity to sunburn. Vitiligo is a chronic persistent and often progressive disorder; spontaneous repigmentation is uncommon and usually occurs around the hairs in a perifollicular pattern. Many patients are poorly educated about their illness.	白癜风病变很少有瘙痒，更容易被日光晒伤。白癜风是一种慢性持久且时常进展的疾病；自发性的色素再生不常见，如果有也通常发生在毛发毛囊周围。许多患者对他们的疾病认知很少。
In one study, 51.3% of patients believed that their vitiligo was caused by poor medical care, 30% thought personal behavior played a major role, 25% - wrong diet, 21.3% - altered state of mind, and 20% blamed only pollution or environmental alterations. All the beliefs mentioned above are considered by the scientific community to be "per se" unfounded and misleading, even if all of them may offer some true indications for understanding the disease and for finding the cure. Vitiligo is a disease that presently cannot be cured, but still can be treated successfully with many different approaches. Its progression can be halted in almost 90% of cases with appropriate therapy, most frequently by combining different treatments. More than 75% of subjects affected by vitiligo respond satisfactorily to active treatments (medical or surgical). Thus, it is not true that there is nothing that can be done for vitiligo. In fact, just the opposite is true.	在一项研究中，51.3%的患者认为他们的白癜风是由于不良的医疗护理，30%的患者认为个人行为起主要作用，25%认为是不良饮食，21.3%认为是精神状态的改变，20%将其只归咎于污染或环境变化。 上面提到的所有观点被科学界认为是 "本身"毫无根据的和误导性的，即使他们可能提供一些真正的用于理解疾病和寻找治疗的指证。 白癜风目前尚无法治愈，但仍有多种不同的方法有效治疗。适当的治疗，通常是联合治疗，可使近 90%的患者病情停止进展。超过 75%的白癜风受试者对有效的（内科或外科）疗法的治疗反应令人满意。 因此，不要对白癜风束手无策；事实上，正好相反。
## Question 2. Is vitiligo a common disease?	## 问题 2. 白癜风是常见病吗？
Key points •Nearly 100 million people worldwide are affected by vitiligo. •Vitiligo is not common in some countries and is very common in other countries: in China 0.09% of the population is affected, while in Gujarat (India) 8.8% have vitiligo.	要点 •全球近 1 亿人患有白癜风。 •白癜风在一些国家是不常见的，然而在另一些国家是很常见的：在中国 0.09%的人口患病，而在古吉拉特邦（印度）8.8%的人口患有白癜风。

•In females, vitiligo starts mainly in the first decade of life. •In males, the peak prevalence occurs in the fifth decade of life. •At present, no convincing explanations can be found for this wide variation in prevalence in different countries.	•女性大多十岁前发生白癜风。 •男性白癜风发病高峰在 50 岁。 •目前，对于不同国家发病率的巨大差异没有发现令人信服的解释。
Answer The prevalence of vitiligo is believed to be between 0.5% and 2% of the world population on average, but local numbers may vary greatly. Large studies in China, India, and Denmark have found the prevalence to be 0.093%, 0.005%, and 0.38%, respectively. Gujarat, India is considered to have the highest prevalence in the world with 8.8% of the local people affected by vitiligo. Men and women are equally affected, but women are more likely to seek treatment. In most studies, 20% of vitiligo subjects report to having a first-degree relative suffering from vitiligo. The mean age of onset is earlier in those patients having family history of vitiligo, which ranges from 7.7% to more than 50%. Vitiligo is significantly more prevalent in young women (≤ 30 years of age) than in young men. The peak occurrence in females occurs in the first decade of life. Male peak prevalence is in the fifth decade of life. Vitiligo is more frequently diagnosed in spring and summer (64.4%). ## Question 3. What causes vitiligo? Key points	解答 白癜风的世界平均患病率介于 0.5%到 2%之间，但不同地区的患病率可能差异很大。在中国、印度和丹麦的大量研究中已经发现患病率分别为 0.093%，0.005%和 0.38%。印度的古吉拉特邦的白癜风患病率被认为是世界最高的，当地人的白癜风患病率为 8.8%。男女患病率相同，但女性更可能寻求治疗。 在大多数的研究中，20%的白癜风受试者称他们的一级亲属有白癜风患者。那些有白癜风家族史的病人（7.7%到 50%）发病的平均年龄比一般人群较早。年轻女性(≤30 岁)的白癜风发病率)比年轻男性高。 女性大多十岁前发生白癜风。 男性白癜风发病高峰在 40-50 岁。 有 64.4%的白癜风诊断是在春天和夏天作出的。 ## 问题 3. 白癜风是由什么引起的？ 要点

•The cause of vitiligo is unknown. •There are different types of vitiligo. • The different types could have different origins and causes.	•白癜风的病因未知。 •白癜风有不同的类型。 •不同类型可能有不同的起源和病因。
•The most widespread forms of vitiligo seem to be related to an immune system disorder resulting in the production of antibodies against melanocytes. Stressful life events, infections, and the accumulation of toxic compounds in the body are under investigation.	•白癜风的最普遍类型似乎与免疫系统紊乱产生的抗黑素细胞抗体有关。生活中的压力事件、感染和有毒化合物在体内的累积是否起作用正在研究中。
•Limited forms of vitiligo seem to be related to an alteration in skin nerves.	•局限性的白癜风似乎与皮肤神经的变化有关。
•The autoimmune hypothesis is the best documented theory: it seems that the immune system reacts against the cells which produce melanin pigment.	•自身免疫性假说是最具证明力的理论：免疫系统似乎与产生黑色素的细胞发生作用。
•The neurohumoral, cytotoxic, and oxidative stress theories have moderate evidence (All medical terms will be explained in the following pages.)	•神经体液、细胞毒性和氧化应激理论证据一般(所有的医学术语将在接下来的页面中解释)。
•New theories focus on melanocytorrhagy – i.e. melanocytes being discharged by the skin – and on decreased melanocyte survival in the skin.	•有新理论关注黑素细胞脱落，即表皮内的黑色素细胞被排除–和皮肤中存活的黑素细胞减少。
Answer	解答
It remains unclear what causes damage to melanocytes and their subsequent total inactivation and/or disappearance in vitiligo skin. There are several theories; the most prominent are autoimmune, neurohumoral (related to abnormal detachment of melanocytes from the epidermal layers) and autocytotoxic. None are mutually exclusive, and it is likely that each of them partially contributes to the disease development.	目前尚不清楚什么导致黑素细胞损伤以及随后的整体失活和/或在白癜风皮损中的消失。有几个假说；最著名的是自身免疫性、神经体液（与黑素细胞从表皮层的异常脱离相关）和自身细胞毒性。几个假说之间并不相互排斥，可能它们都对疾病的发展有作用。
The current opinion is that vitiligo represents a group of different disorders with a similar outcome: the appearance of white patches on the skin.	当前的观点是，白癜风代表一组有相似结果（皮肤上出现白斑）的不同疾病。

Convergence theory states that stress, accumulation of toxic compounds, infections, autoimmunity, genetic predisposition, altered cellular environment, and impaired melanocyte migration can all contribute to the vitiligo initiation process. Autoimmune mechanisms are likely to underlie generalized vitiligo, while a more localized phenomenon (i.e. the altered activities of sensitive nerves in the skin) may be responsible for segmental or focal vitiligo. At the site of physical trauma to the skin, vitiligo may develop; this is called a "Koebner phenomenon".	趋同理论认为，压力、有毒化合物的累积、感染、自身免疫、遗传易感性，细胞环境的改变和受损的黑色素细胞迁移都参与了白癜风的启动过程。自身免疫机制有可能是泛发型白癜风的基础，而局部化现象（即皮肤里敏感神经活动的改变）可能是节段性或节段性白癜风的原因。皮肤受物理刺激后的部位可发展为白癜风—这被称为"同形反应"。
## Question 4. I have vitiligo: will my children have vitiligo too? Key points •Be optimistic! If you have vitiligo, most probably your children will not have vitiligo. •The genetic component in vitiligo is weak and quite inconsistent. •If I have vitiligo, it is possible that all my relatives may have increased probability of developing vitiligo. •Identical twins have only 23% concordance of developing vitiligo: this means that the pure genetic component of the disease is not really dominant. •Most cases of vitiligo are sporadic, thus it is not necessary that children of parents with vitiligo will also develop vitiligo. •In less than 20% of vitiligo patients are close relatives affected. Answer	## 问题 4. 我患有白癜风 :我的孩子也会患吗? 要点 •要乐观!如果你患有白癜风，你的孩子很有可能不会患白癜风。 •白癜风的遗传因素作用不是很强且不总是发挥作用。 •如果我患有白癜风，我所有的亲戚发展为白癜风的几率可能会增加。 •同卵双胞胎只有 23%的概率同时发展白癜风：这意味着纯遗传因素不起支配作用。 •大多数的白癜风病例是散发的，因此白癜风患者的孩子不一定也患白癜风。 •不到 20%的白癜风患者的近亲患病。 解答

Although most cases of vitiligo are sporadic, familial clustering is not uncommon, and up to 20% of patients report to having affected relatives. In Caucasians, the lifetime frequency of vitiligo among patients' siblings is 6.1%, an 18-fold increase over the studied population. The frequency of vitiligo among first degree relatives in Caucasian, Indo - Pakistani, and Hispanic populations is 7.1%, 6.1%, and 4.8%, respectively, compared to an estimated worldwide frequency of 0.14% to 2%.	虽然大多数情况下的白癜风是散发的，家族聚集并不少见，高达 20%的患者称有患病亲属。在高加索人中，患者的兄弟姐妹中白癜风的一生患病率的是 6.1%，比筛查人群高出 18 倍。与估计的世界范围的发病率为 0.14%到 2%相比，一级亲属中白癜风的患病率在高加索人、印度-巴基斯坦人和西班牙裔人口中分别为 7.1%，6.1%和 4.8%。
Epidemiological studies indicate that vitiligo is inherited in a multi-factorial pattern. Identical twins with identical DNA have only a 23%	流行病学研究表明，白癜风是多因素的遗传模式。具有相同 DNA 的同卵双胞胎共同发展白癜风的概率只有 23%。
concordance in developing vitiligo, suggesting a significant non-genetic component in the disease.	表明此病有明显的非遗传因素。
Familial clustering of generalized vitiligo with other autoimmune diseases is compelling evidence for an autoimmune predisposition, a common underlying genetic susceptibility to an immunological aberrancy Among vitiligo patients, 20% report thyroid disease (an 8-fold increase over the general population), particularly hypothyroidism. Similarly, there is an increased frequency in other forms of autoimmune diseases and autoimmune disorders of the endocrine system (see later on).	泛发型白癜风伴发其它自身免疫性疾病的家族性聚集是自身免疫性倾向的引人注目的证据，在白癜风父母中常见潜在的免疫异常的遗传易感性。20%的白癜风患者中报告有甲状腺疾病（比一般人群增加了 8 倍），特别是甲状腺功能减退。同样，其他形式的自身免疫性疾病和内分泌系统的自身免疫性疾病的频率也增加（见后文）。
## Question 5. Is it true that my quality of life will be affected by vitiligo?	## 问题 5. 我的生活质量真的会受白癜风影响吗?
Key points	要点
•Vitiligo may impair one's quality of life mainly because it is poorly understood in many communities.	•白癜风可能降低生活质量，主要是因为在许多社区对它知之甚少。
•It is often confused with leprosy or sexual infections, and even seen as a sign of a sin or a sort of punishment sent by God.	•它经常被与麻风病或性传播疾病混淆，甚至被人们视为是罪恶的迹象或上帝派来的一种惩罚。

•Women are generally more psychologically affected by the skin disorder than men.	•女性通常比男性更容易在心理上受到的皮肤病的影响。
•For doctors, it is important to assess the patient's quality of life during encounters, and take action.	•对医生而言，重要的是要评估病人在患病期间的生活质量，并采取行动。
•The dermatologist must always inform vitiligo patients of the possibility of successful treatments: this changes the patient's mood immediately.	•皮肤科医生必须告知白癜风患者治疗成功的可能性：这能立即改变病人的情绪。
•Observation of re-pigmentation over the white patches always brings optimism to the vitiligo patient.	•观察到白斑上的复色总使白癜风患者乐观。
•Psychotherapy can be of help in selected cases, but only after careful consideration.	•心理疗法对特定的患者有帮助，但要经过仔细考虑。
•Regional Vitiligo Support Groups and VRF are committed to eradicate all discriminatory attitudes against vitiligo sufferers all over the world.	•地区白癜风支持团体和白癜风研究基金会（Vitiligo Research Foundation，VRF）致力于根除世界各地对白癜风患者的所有歧视态度。
Answer	解答
It is true that vitiligo can be a psychologically devastating disease, especially in darker skinned individuals and in case of improper management by the dermatologist.	的确，白癜风可以是一个对心理造成致命打击的疾病，尤其是在深肤色的个体以及在皮肤科医生治疗不当的情况下。
The assessment of quality of life should always be made during the first consultation, because there may be a difference between patient's and physician assessment of severity, and it should be followed during treatment to assess the patient's satisfaction. Studies suggest that vitiligo imparts a mental and emotional burden comparable to that of chronic hand eczema or psoriasis, and that women tend to suffer more than men. Vitiligo patients also experience sexual difficulties and a variety of psychological problems, such as adjustment disorder, sleep disturbance, depression, anxiety, and so-called "dysthymia".	生活质量的评估应该一直在第一次咨询时制定。因为患者和医师对严重程度的评估可能不同，治疗期间应继续评估病人的满意度。研究表明，白癜风造成的精神和情绪负担与慢性手部湿疹或牛皮癣相似，女性比男性更明显。白癜风患者也经历性困难和各种各样的心理问题，如调整障碍、睡眠障碍、抑郁、焦虑和所谓的"精神抑郁"。

Clinical variables, such as duration, facial or chest involvement, unsuccessful previous treatment, darker skin type, and the extent of disease may predict a poorer quality of life.	临床变量, 如疾病持续状态、面部和胸部的皮损、不成功的治疗史、深色皮肤的类型和疾病的程度可作为生活质量较差的指证。
In fact, vitiligo may be, or may become, a psychologically devastating disorder. The fact that it typically occurs in exposed areas (face and hands) has a major impact on self-esteem and perception of the self. In many societies, vitiligo is poorly understood and is believed to be a sign of leprosy or sexually transmitted infection. In these societies, women with vitiligo have difficulty getting married and finding educational and vocational opportunities according to their skills. Many patients worry about the disease worsening, have their social life affected, and feel embarrassment, depression, and shame.	事实上，白癜风可能是（或者可能发展成）对心理造成致命打击的疾病。典型发生在暴露部位（脸和手）的事实对自尊和自我感觉有重大影响。在很多地区，人们对白癜风知之甚少，并认为其是麻风病或性传播感染的征兆。在这些地区中，患有白癜风的女性在结婚、教育以及求职时有困难。许多病人担心疾病恶化，影响社交生活，并感觉尴尬、抑郁和羞耻。
Correct information on vitiligo (extended to non-affected subjects, media system and to the Authorities) will rapidly change this outrageously and incredible discriminated attitude against the alteration of the color of the skin. Vitiligo support groups and the VRF are committed to fighting against all irrational feelings and behaviors which negatively impact the quality of life of vitiligo patients all over the world.	关于白癜风的正确信息（扩展到未受影响的个体、媒体和当局）会迅速改变这种残暴和不可思议的对肤色改变的歧视态度。白癜风支持团体和白癜风研究基金会（Vitiligo Research Foundation，VRF）致力于反对世界各地的所有对白癜风患者生活质量产生负面影响的非理性情感和行为。
## Question 6. How can I be sure that I am really affected by vitiligo?	## 问题 6. 如何确定我真的患了白癜风？
•Key points	•要点
•Uniformly white patches surrounded by normal skin, not painful and usually not itchy: this is the most usual presentation of vitiligo.	•被正常皮肤围绕的均匀白色斑片，不伴疼痛及瘙痒，这是白癜风最常见的表现。
•Vitiligo is usually discovered during spring and summer months in sun-exposed areas of skin. The resulting white patches do not pigment after sun exposure and will have a tendency to sunburn easily.	•白癜风通常在春夏季日光暴露的部位被发现，这些白色斑片在日光暴露后不形成色素沉着，因此更容易被日光灼伤。

•The dermatologist should always make a full body examination for vitiligo.	•为诊断白癜风，皮肤科医师应该对患者进行全面的体格检查。
•A hand device (Wood's lamp) emitting ultraviolet light is usually used to increase the visibility of white patches: this can be enough for a correct clinical diagnosis.	•一件可发射紫外光的手持设备（Wood 灯）常被用来增加白色斑片的可见度：借助此装置足以作出正确的临床诊断。
•A biopsy of the skin is usually not required.	•通常不需要进行皮肤的病理学活检。
•After the examination, appropriate blood tests can be taken and then the appropriate treatment be selected according to blood test results.	•体格检查之后，还可进行适当的血液检测，然后根据血液检测结果选择恰当的治疗方法。
•Rare types of vitiligo are possible and, thus, an assessment by an expert dermatologist is advisable.	•若存在罕见类型的白癜风，建议由经验丰富的皮肤科专家进行评定。
Answer	解答
Discrete, uniformly white patches with convex borders surrounded by normal skin, not painful and very rarely itching are the usual symptoms of vitiligo. White hair can be associated or not with these white patches. Any kind of trauma of the skin may induce white patches of vitiligo in any part of the skin surface; this is called Koebner Phenomenon, and is quite common.	白癜风的常见症状是散在的、均匀分布的白色斑片，边缘可凸出，周围为正常皮肤，无疼痛，极少伴有瘙痒。白色斑片上可能同时或不同时存在白色毛发。任何皮肤外伤都可能在皮肤表面任何部分诱发白癜风；这种很常见的现象叫做 Koebner 现象（同形反应）。
The diagnosis of vitiligo is usually made clinically and with the use of a Wood's lamp, a hand device emitting ultraviolet rays (at 365 nm) which makes the color of white patches even whiter.	白癜风的临床诊断常借助手持装置 Wood 灯，其可发射 365nm 波长的紫外线，使白斑被照射时的白色更明显。

Vitiligo is usually discovered during the spring and summer moths in sun - exposed areas: normal skin becomes tanned while vitiligo skin remains white, with tendency to sunburn. When presentation of vitiligo is atypical, a biopsy can be taken from the skin, in order to show the complete absence of melanocytes in the white patch. A full body examination is necessary to detect all skin areas affected, including mouth mucosal and genital depigmentation.	白癜风通常在春夏季日光暴露的部位被发现，因其正常皮肤被晒黑，而白癜风的皮肤仍然是白色的，而且更容易被日光灼伤。当白癜风的表现不典型时，可行皮肤活检术，可以观察到白斑区黑色素细胞的完全缺失。全面的体格检查是必要的，以检查出皮肤所有受累的区域，包括口唇粘膜和生殖器部位的色素脱失。
## Question 7. I have vitiligo: which blood tests or other examinations are necessary?	## 问题 7. 我患了白癜风 :有必要做哪些血液检测或其它检查？
•Key points	•要点
•After a full body skin examination, specific forms of vitiligo may require blood examination or other medical tests.	•经过全身皮肤查体后，一些特殊类型的白癜风可能需要血液检测或其它医学检测。
•Vitiligo can be generally divided into three classification types: localized, generalized and universal (involving more than 80% of the skin): according to this, different blood tests or specific examinations are necessary.	•白癜风可以大体分为三种类型：局限型、泛发型和全身型（累及超过 80%的皮肤）：据此，不同的血液检测和特殊的检查是必要的。
•Thyroid disorders and autoimmune diseases should be investigated in generalized and universal forms.	•在泛发型和全身型中应该检查甲状腺疾病和自身免疫性疾病。
•Ophthalmologic and auditory investigations can be useful in generalized and universal forms.	•在泛发型和全身型中眼科和耳科的检查是有益的。
•Localized vitiligo usually does not require blood tests or further medical examinations.	•局限型的白癜风通常不需要血液检测和进一步的医学检查。

•In conclusion, generalized and universal vitiligo per se, require the investigation of thyroid disorders and other autoimmune diseases, as well as ophthalmologic and auditory investigations.	•总之，泛发型和全身型的白癜风患者本身需要检查甲状腺疾病和自身免疫性疾病，同时也需检查眼科和耳科疾病的检查。
•Answer	•解答
After the diagnosis of vitiligo, a full body skin examination is necessary in order to evaluate the specific form of the disease. Thyrotropin (thyroid- stimulating hormone) levels, antinuclear antibody titer, and a complete blood count should be considered for all generalized forms of vitiligo, especially when prompted by signs or symptoms. Antithyroidperoxidase antibodies and/or antithyroglobulin antibody tests may also be worthwhile. They are mandatory, if any signs of thyroid disease are present.	在确诊白癜风后，为确定其类型，全身皮肤的查体是必要的。对所有泛发型的白癜风，应考虑检验促甲状腺素（甲状腺刺激激素）水平、抗核抗体滴度、血常规，特别是在有相应的症状或体征提示可能存在这类疾病时。抗甲状腺过氧化物酶抗体和抗甲状腺球蛋白抗体检测也值得检测。若存在甲状腺疾病，则必须要行这两项检验。
The evaluation of possible associated disorders is mandatory in all generalized forms of vitiligo. In these cases all autoimmune diseases should be screened, as well as atopic dermatitis, psoriasis, pernicious anemia and diabetes. Ophthalmologic and auditory investigations can be useful, because melanocytes are present both in the eye and in the inner ear.	对所有泛发型的白癜风，评估其可能存在的相关疾病是必要的。在这些病例中，应该筛查所有的自身免疫性疾病，也包括特应性皮炎、银屑病、恶性贫血和糖尿病。眼科和耳科的检查也是有意义的，因为黑色素同时存在于在眼睛和内耳中。
Question 8. Is it true that vitiligo can be a part of one of the most complex multisystem organ dysfunctions of the human body?	问题 8. 白癜风可能是人体极其复杂的多系统器官功能失调的其中一种表现，这种说法正确吗？
•Key points	•要点

•Vitiligo may be associated with other disorders.	•白癜风可能与其他疾病相关。
•The Dermatologist, in cooperation with Geneticists and Experts in other related fields must properly manage each and every associated/isolated condition.	•皮肤科医师协同遗传学家和其它相关领域的专家必须合理应对单个或每一个伴随的/单独的疾病状况。
•Subjects with vitiligo may also be affected by a multi-system organ dysfunction.	•白癜风患者可能受到多系统器官功能障碍的影响。
•The latter are named “vitiligo systemic syndromes”.	•后者命名为“白癜风系统综合征”。
•Usually these cases are discovered at birth or during infancy.	•通常这些病例在患儿出生或婴幼儿期被发现。
Answer	解答
Disorders and syndromes possibly associated with vitiligo (in alphabetical order)	可能与白癜风相关的疾病或综合征 （按英文字母顺序排列）
More common associations	常见相关疾病：
Addison disease	Addison 病
Alopecia areata	斑秃
Atopic dermatitis	特应性皮炎
Autoimmune thyroid disease	自身免疫性甲状腺疾病
Chronic urticaria	慢性荨麻疹
Diabetes mellitus	糖尿病
Halo nevi	晕痣
Hyperacusis	听力减退
Hypothyroidism	甲状旁腺功能减退
Ichthyosis	鱼鳞病
Ocular abnormalities	眼部异常
Pernicious anemia	恶性贫血
Psoriasis	银屑病
Rheumatoid arthritis	类风湿关节炎
Less common associations	少见相关疾病
Paraneoplastic acral keratosis	副肿瘤性肢端角化症
Bazex Alezzandrini syndrome	Bazex Alezzandrini 综合征

APECED* syndrome (*Autoimmune PoliEndocrinopaty Candidiasis Ectodermal Dysplasia)	APECED* 综合征（*自身免疫性多内分泌腺病－念珠菌病－外胚层营养不良）
Asthma	哮喘
Ataxia	共济失调
Telangiectasia	毛细血管扩张症
Deafness	耳聋
DOPA-responsive dystonia Dysgammaglobulinemia	多巴反应性肌张力障碍
Abnormal agammaglobulinemia	异常丙种球蛋白血症
Hemolytic Anemia (autoimmune)	自身免疫性溶血性贫血
Hepatitis C	丙型肝炎
HIV	HIV
Inflammatory bowel disease	炎症性肠病
Kabuki syndrome	Kabuki 综合征
Kaposi sarcoma	Kaposi 肉瘤
Lymphoma	淋巴瘤
Melanoma	黑色素瘤
MELAS syndrome	MELAS 综合征
Morphea	硬斑病
Multiple sclerosis	多发性硬化
Myasthenia gravis	重症肌无力
Nonmelanoma skin cancer	非黑素性皮肤癌
Nail distrophy	甲营养不良
Pemphigus vulgaris	寻常型天疱疮
Sarcoidosis	类肉瘤病
Schmidt syndrome	Schmidt 综合征
Systemic lupus erythematosus	系统性红斑狼疮
Turner syndrome	Turner 综合征
Twenty-nail dystrophy	二十甲营养不良
Vogt-Koyanagi- Harada syndrome	Vogt-Koyanagi- Harada 综合征
Question 9. Is there a full list of white patches on the skin that are not associated with vitiligo?	问题 9. 是否有一个表现为皮肤白斑但却不是白癜风的完整列表？
•Key points	•要点

•Not all white patches on the skin are a sign of vitiligo. White patches not diagnosed as vitiligo are named leukodermas.	•并不是所有皮肤白斑都是白癜风的表现。不能诊断为白癜风的白斑笼称皮肤白斑病（leucoderma）。
• A list of the so-called leukodermas is available for Dermatologists who face the problem differentially diagnosing vitiligo.	•对于皮肤科医师诊断白癜风有困难时，有一个皮肤白斑的列表是必要的。
•An expert Dermatologist should be able to recognize all cases of leukodermas.	•有经验的皮肤科专家应该能够识别所有的皮肤白斑病。
• Different kinds of leukoderma require different treatments.	•不同的皮肤白斑病需要不同的治疗。
•Answer	•解答
Not all white spots appearing on the skin are vitiligo. White patches that are not diagnosed as vitiligo are named leukodermas.	并不是皮肤上所有的白斑都是白癜风。不能诊断为白癜风的白斑称为皮肤白斑病。
Here is a list of leukodermas for dermatologic use:	以下是皮肤白斑病的列表：
• Differential diagnosis in vitiligo: the Leukodermas	**•白癜风的鉴别诊断：白斑病**
Chemically-induced leukoderma (often occupational)	**化学诱导的白斑病（通常是职业）**
Arsenic	砷、酚及其他衍生物
Phenols and other derivatives, cathecols	邻苯二酚
Infections	**感染**
Leishmaniasis (post kala-azar)	利什曼病（黑热病）
Leprosy	麻风病
Onchocerciasis	盘尾丝虫病
Secondary siphylis	二期梅毒
Tinea versicolor	花斑癣
Treponematoses (pinta and syphilis)	密螺旋体病（品他病和梅毒）
Genetic syndromes	**遗传综合征**
Chediac-Higashi syndrome	Chediac-Higashi 综合征
Hypomelanosis of Ito	伊藤黑（色）素过少症
Oculocutaneous albinism	眼皮肤白化病
Piebaldism	斑驳病
Tuberous sclerosis	结节性硬化症
Vogt-Koyanagi-Harada syndrome	Vogt-Koyanagi-Harada 综合征
Waardenburg syndrome	Waardenburg 综合征

Postinflammatory hypopigmentation	**炎症后色素脱失**
Atopic dermatitis/allergic contact dermatitis	特应性皮炎/过敏性接触性皮炎
Nummular dermatitis	皮炎
Phototherapy- and radiotherapy-induced	钱币状皮炎
hypopigmentation	光疗和放疗诱导的色素减退
Pityriasis alba	白色糠疹
Postraumatic hypopigmentation (scar)	创伤后色素减退（疤痕）
Psoriasis	银屑病
Sarcoidosis	结节病
Systemic lupus erythematosus	系统性红斑狼疮
Topical or systemic drug-induced depigmentation	局部或全身的药物诱导的色素脱失
Neoplastic	**肿瘤**
Amelanotic melanoma	无色素性黑色素瘤
Halo nevus	晕痣
Melanoma-associated leukoderma	黑色素瘤相关白斑病
Mycosis fungoides	蕈样肉芽肿
Idiopathic	**特发性**
Idiopathic guttate hypomelanosis	特发性点滴状黑色素减少
Lichen sclerosus et atrophicus	萎缩性硬化性苔藓
Lichen striatuslike leukoderma	线样苔藓样白斑病
Morphea	硬斑病
Melasma (caused by contrast between lighter and darker skin)	黄褐斑（皮肤亮区和暗之间的对比所造成的）
Progressive (or acquired) macular hypomelanosis	渐进性的（或获得性的）黄斑黑色素减少
Malformations	**畸形**
Nevus anemicus	贫血痣
Nevus depigmentosus/hypopigmentosus	无色素痣
Nutritional	**营养性疾病**
Kwashiorkor	**夸希奥夸病（又称为蛋白质缺乏综合征或恶性营养不良综合征）**
Selenium deficiency	**硒缺乏症**
Question 10. Whitish and depigmented patches on skin: how can I know what they are?	问题 10. 皮肤发白和色素减退斑：我如何知道这是什么?
•Key points	•要点

• Not all whitish patches on the skin are vitiligo.	•并不是所有皮肤发白的斑片都是白癜风。
•Depigmented patches on the skin, other than vitiligo, are named leukodermas; they can be "occupational".	•除了白癜风，皮肤色素脱失斑可被称为白斑病，它们可能是"职业相关"的。
• Occupational and drug-related forms of depigmentation can be manifested as vitiligo.	•职业性或药物相关性的色素脱失可表现为白癜风。
•Common disorders with similar manifestation include Nevus Depigmentosus, Piebaldism, etc.	•常见的与白癜风症状相似的疾病包括无色素痣、斑驳病等。
•Answer	•解答
No, not all white patches are vitiligo, but white patches resembling vitiligo are not unusual on human skin. They are called leukodermas. Chemical leukoderma can be induced by dyes, perfumes, detergents, cleansers, insecticides, rubber condoms, rubber slippers, black socks and shoes, eyeliners, lipliners, lipsticks, toothpaste, antiseptics with phenolic derivatives, and mercuric iodide-containing ''germicidal'' soap.	不是所有的白斑都是白癜风。但是，类似白癜风的皮肤白斑并不罕见，我们称之为皮肤白斑病。化学性的白斑病可能由含酚衍生物的染料、香水、洗涤剂、杀虫剂、橡胶避孕套、橡胶拖鞋、黑色丝袜和鞋子、眼线膏、唇线膏、口红、牙膏、防腐剂、碘化汞的杀菌皂等诱发。
Occupational vitiligo may occur in those individuals who work with depigmenting substances, such as hydroquinone, para-tertiary butyl catechol, para-tertiary butyl phenol, para-tertiary amyl phenol, and hydroquinone monomethyl ether.	职业性的白癜风可能发生在工作中接触脱色素类物（例如：氢醌、对三丁基邻苯二酚，对三丁基苯酚、对三戊基苯酚和氢醌一甲基醚）的个体中。

Depigmentation has also been reported in shoemakers and after contact with arsenic containing compounds. Nevus depigmentosus is a segmental hypopigmentation detectable in the first year of life and stable in size in proportion to the child's growth. With a Wood's lamp, the contrast between lesional and normal skin is less marked than in vitiligo. Piebaldism is an autosomal dominant disease presenting at birth, with anterior midline depigmentation and a white forelock (poliosis). Many other types of leukoderma have been described. The diagnosis and treatment of leukodermas requiress an expert approach. The only way to know if a depigmented patch on the skin is vitiligo or not is to consult a Dermatologist with special interest in Pigmentary Disorders of the skin.	也有报道在鞋匠和接触过砷化合物的人群出现色素脱失。无色素痣是一种局部色素减少，可在出生第一年检测到，大小随儿童生长，但比例恒定。在 Wood 灯下，其正常皮肤与病变部位的对比，较白癜风不明显。斑驳病是一种常染色体显性遗传病，出生时即出现前正中线色素脱失，伴有额部白色毛发。许多其他类型的白斑病也被描述过。皮肤白斑病的诊断和治疗需要专业方法。唯一判别皮肤上的白斑是否为白癜风的最好方法是咨询对皮肤色素疾病有相关研究的皮肤科医师。
## Question11. How can I treat vitiligo?	## 问题 11. 如何治疗白癜风？
•Key points	•要点
•Many different methods may be used to treat vitiligo.	•许多不同的方法可用于治疗白癜风。
• Treatment should always start with efficacious and safe approaches and at the same time with less aggressive and cost/effective methods.	•治疗通常多首选安全有效、同时创伤小、花费低的方法。
•A targeted UVB therapy (308 or 311 nm) alone or associated with topical steroids or with topical calcineurine inhibitors represents the most efficacious and safe approach if less than 15% of the skin is affected.	•如果皮肤受累面积少于 15%，靶向 UVB(308 或 311nm)单独或联合外用激素/外用钙调神经磷酸酶抑制剂是最为安全有效的方法。

• Second-, third- and fourth-line therapies must be discussed by the dermatologist and vitiligo-affected subject in an open and constructive way, keeping in mind that the less aggressive and the most cost/effective modalities are always the first choice.	•二、三和四线的治疗必须由皮肤科医师和白癜风患者以开放和建设性的方式共同探讨, 需要记住的是创伤小、花费小的治疗方法永远是首选。
•Don't feel frustrated if you don't achieve the goal with the first-line treatment: discuss other options with your dermatologist and go on according to your new treatments.	•如果一线治疗方案没达到令你满意的目标，不要沮丧，和你的皮肤科医生讨论其他选择并按照新的治疗方案进行治疗。
•Be always optimistic: you have very many chances to find the right treatment for your vitiligo!	•保持乐观：你有很多机会找到治疗白癜风的合适的治疗方案！
• Answer	•解答
Choosing a treatment for vitiligo can be difficult, sometimes overwhelming. In general, first-line therapy should be safe, effective, minimally invasive, and cost efficient. More complex, invasive, and time-consuming options should be reserved for subjects with recalcitrant disease. Each therapeutic modality should be tried for a sufficient period of time because the initiation of pigmentation varies and is in general rather slow. An effective therapy should be continued as long as there is an improvement or the lesions repigment completely.	选择白癜风的治疗方案存在一定的困难，有些时候难度巨大。一般来说，一线治疗方案安全、有效，创伤小、花费低。较复杂，侵入性的、费时的治疗方案通常应用于疾病顽固的患者。因为色素恢复相当缓慢，每一种治疗模式都应该用足够长时间，有效的治疗应该持续到皮损改善或完全复色。
We are in need of consistent data on maintenance regimens or the long-term persistence of pigmentation with any of the recommended therapies.	无论应用哪种推荐的治疗方案，关于维持治疗方案或长期保持色素沉着方面的一致的数据目前仍有欠缺。
How to treat vitiligo:	如何治疗白癜风：
First-line. There are many topical and some oral agents that are inexpensive, easy to use, and effective at halting disease progression and inducing repigmentation. Corticosteroids (CSs) are consistently reported as the most effective single topical agent, with Calcineurine Inhibitors (CIs) being always a close second. Due to the possibility of local side effects of CSs, scheduled drug holidays are recommended.	一线治疗　有很多外用和口服药物廉价、易用，且能有效延缓疾病进展和诱导复色。皮质类固醇（CSs）是最有效的外用药，钙调磷酸酶抑制剂（Cis）次之，考虑到外用激素的副作用，建议定期间歇应用药物。

In our experience focused micro-phototherapy (using a ,308 or 311 nm emission device) is the recommended treatment either when used alone and in combination with topical therapy. Topical CIs are effective as monotherapy in patients who do not tolerate topical CSs.	根据我们的经验，聚焦微光治疗(focused micro-phototherapy，应用 308nm 或 311nm 发射装置)无论是单独使用还是联合外用治疗都是推荐的治疗方式。不能耐受外用激素的患者，单用钙调磷酸酶抑制剂同样有效。
They are also effective for recalcitrant lesions on the extremities when applied nightly under occlusion. Current data does not support monotherapy with topical vitamin D3 analogs, but Vitamin D3 can augment the effect of topical steroids even in previously steroid non-responsive patients. Topical L-phenylalanine, topical antioxidants and mitochondrial stimulating cream, associated with natural sunlight with oral khellin have all been suggested as efficacious alternative first-line therapies.	对于肢端的顽固病变，每晚一次封包治疗也是有效的。现有数据不支持单独外用维生素 D3 衍生物治疗。但是维生素 D3 可以增加外用类固醇激素的效果，包括既往对类固醇激素不敏感的患者。外用 L-苯丙氨酸、抗氧化剂和线粒体刺激霜，联合自然光照和口服凯林（khellin），鉴于其治疗有效性，已被作为可供选择的一线治疗方案。
When administered in patients with an active disease, a short course of oral or intravenous steroids can arrest vitiligo progression and induce repigmentation in the majority of patients. However, the optimal dose to maximize benefits and reduce the incidence of side effects has yet to be determined.	对于大多数活动期患者，短期口服或静脉给予激素可停止白癜风进展并诱导复色。然而，效果最佳且副作用发生率最低的最适合剂量仍不明确。
Second-line. A second - line treatment is considered when “first-line” one fails. Given the cost, time commitment required by patients and staff, and higher incidence of side effects, phototherapy is recommended as a second-line therapy for patients who fail conservative first - line treatment(s). Focused micro- phototherapy (308 or 311 nm) should be electively offered when cutaneous involvement is less than 15%. Narrow Band Ultra Violet type B (NBUVB) phototherapy produces the greatest clinical improvement compared to other forms of light therapy; combinations with topical therapy work better than either alone.	二线治疗　当一线治疗失败时考虑二线方案治疗。考虑到患者和医生时间和金钱上的花费，以及其副作用发生率的增加，推荐光疗作为保守一线治疗失败后的二线治疗方案。当受累皮肤面积小于 15%时，聚焦微光疗法(308 或 311nm)可被选用。窄波 UVB 光疗(NBUVB)相对于其他类型的光疗产生的临床疗效最好，并且联合外用药治疗效果强于单用两者任意一种治疗。

Topical C Is with NBUVB phototherapy have the best clinical outcomes compared to other topical adjuvant therapies. It is uncertain whether adding a vitamin D3 analog to NBUVB phototherapy enhances the effects. While inferior to NBUVB in terms of clinical response, both UVA and broadband UVB phototherapies with various adjuvant therapies are beneficial as alternative second-line treatments.	窄波 UVB（NBUVB）联合 Cls 外用，相对于与其他外用药联用治疗达到的临床效果最佳。加入维生素 D3 衍生物是否增加 NBUVB 光疗效果不能肯定。用 UVA 和广谱 UVB 光疗联合其他多种辅助治疗，较窄波 UVB（NBUVB）光疗的临床差，但其作为二线治疗方案同样有效。
Third-line. Targeted phototherapy with the 308 nm Monochromatic Excimer Laser (MEL) is an effective as monotherapy, superior to NBUVB phototherapy when compared side by side. However, it should be reserved for those patients, who fail NBUVB phototherapy, except in very limited disease, or in patients, who can afford the time and cost of the therapy. MEL works best in combination with topical CSs or CIs.	三线治疗　308nm 单频准分子激光（MEL）靶式光疗作为单一治疗是有效的，且优于 NBUVB 光疗。但是，在窄波 UVB 失败的患者中，除了那些皮损特别局限及承担得起时间、治疗费用的患者外，该方法的应用受到限制。MEL 联合外用 CSs 或 CIs 时效果最佳。
Fourth-line. Surgery should be offered when lesions persist despite appropriate therapy. There are many different surgical techniques available. While the specific technique will depend on individual patient characteristics and the custom practice of the expert surgeon, it can provide excellent cosmetic results for limited lesions recalcitrant to other modalities.	四线治疗　当经过长时间合理治疗，病变仍持续存在时，应考虑手术治疗。现有可用的不同的外科技术很多，但是技术的选择依赖于患者的个体特点和专业外科医师的临床实践。对于那些对其他治疗有抵抗的局限病损，可达到很好的美容效果。
Special populations. Although patients with Segmental vitiligo (SV) have been studied alongside those with Non-Segmental Vitiligo (NSV), it is unclear how applicable study results refer to this population. SV tends to be more stable and recalcitrant to treatment. The He-Ne laser seems to be more effective in this population. Generalized/universal vitiligo may also require tailored treatment.	特殊人群　我们同时研究了节段型白癜风（SV）患者与非节段型白癜风患者，但是研究结果针对此人群的可应用性并不明确。节段型白癜风（SV）更趋向于稳定，对治疗反应不佳；氦氖激光对此人群的治疗效果更佳。泛发型和全身型白癜风也可能需要调整方案的治疗。

The extent of the disease can be so great that it may be nearly impossible to provide cosmetically pleasing repigmentation. For these patients, depigmenting agents should be offered and discussed extensively for their non-reversible effects.	部分患者皮损范围很广，以致于很难达到外观满意的复色。对于这些患者，应该考虑应用脱色剂，但是需要探讨考虑其产生的不可恢复的作用。
Considerations. At all stages of therapy, keep in mind that vitiligo can be a lifelong disease that may extensively damage one' s psychosocial sense of wellbeing. Acknowledging this hidden impact of the disease on quality of life and offering support for dealing with it will improve the physician - patient relationship greatly and promote a positive outcome. Camouflage can always provide temporary cosmetic relief, and psychotherapy should be offered to help patients deal with the psychological disease burden.	思考　无论哪种阶段的治疗，要记住的是白癜风是可以伴随终生的疾病，这可能普遍会对患者社会心理造成破坏。意识到其对生活质量潜藏的影响，并且提供应对它的支持，可以极大增强医患关系并带来正面影响。遮盖的方式可以提供暂时的美容性的改善，应该提供心理治疗来帮助患者应对心理上的负担。
An approach to treating a patient with vitiligo (treatment algorithm): we have divided treatment options into first-, second-, third-, and fourth-line options. The treatment order was determined by the level of evidence in literature for each treatment. Treatment options for special cases are also included.	治疗白癜风的方法（递进方式）：我们将治疗分成一线、二线、三线和四线选择。治疗等级由文献的证据水平决定。也包括特殊病例的治疗选择。
Focused Micro-Phototherapy (PMP)	聚焦微光疗法（PMP）
308 or 311 nm – has been included for efficacy and safety reasons in the “first-line” offer.	308nm 或 311nm 因其安全性和有效性已被作为一线治疗方案。
Question12. Is it possible to stop the progression of vitiligo?	问题 12. 有可能停止白癜风进展吗？

Key points	要点
• Localized vitiligo usually stops its progression in 1-2 years after its first manifestation.	•局限型白癜风通常在发病后 1 到 2 年停止进展。
•Generalized vitiligo is progressive in 73% of the cases.	•73%的泛发型白癜风病例呈进展性。
• Administration of oral or intravenous corticosteroids may lead to the cessation of disease progression in 85% of cases.	•85%的病例口服或静脉给予皮质类固醇激素可停止疾病的进展。
•Vitiligo progression could be stopped in 4 out of 5 cases by the use of potent systemic corticosteroids, but due to possible relevant side effects, the decision must be taken by expert dermatologists after careful evaluation.	•4/5 白癜风病例可在系统应用皮质激素后停止进展，但是由于存在相关副作用，系统应用激素治疗必须由专业皮肤科医师仔细评估后再采用。
•Answer	•解答
Vitiligo is progressive in 73% of cases and regressive in 1.3%. We usually explain to the patients that progression depends on how the disease spreads: localized or generalized forms have different behavior. In 89% of localized vitiligo cases, disease activity ceases after 1-2 years of rapid spreading over the affected skin area, while generalized vitiligo shows less progression only when it starts on the face (52% of the cases).	白癜风病例中，73%是进展的，1.3%是减退的。通常，我们向患者解释其进展取决于疾病累及范围：局限型和泛发型有不同的表现。89%局限型白癜风的病例，在快速扩散后 1-2 年活动性停止；52%泛发型白癜风病例，如果皮损开始出现在面部时，其进展可能性较小。
In 89% of cases we can arrest patch extension in widespread vitiligo with oral minipulse corticosteroid therapy (5 mg betamethasone on 2 consecutive days per week) . Use of corticosteroid methylprednisolone 8 mg/Kg intravenously for 3 consecutive days in patients with generalized vitiligo led to temporary cessation to the disease progression in 85% of cases and repigmentation in 71% of cases. Other steroids used intravenously showed a similar degree of limiting the disease progression.	89% 的病例我们可通过口服小剂量激素治疗（每周连续两天 5 毫克倍他米松）阻止广泛扩散白癜风白斑的扩展。连续三天静脉应用甲泼尼松（8mg/Kg）治疗泛发型白癜风，可以使 85%患者疾病进展短暂停止和 71%病例的复色。其他的类固醇激素静脉治疗显示了相似的限制疾病进展的效果。

Thus, it is true that vitiligo progression could be stopped in 4 out of 5 cases by the use of potent systemic corticosteroids. However, systemic corticosteroids might have possible relevant side effects, hence, the decision for their use in limiting vitiligo progression must be taken by expert dermatologists and after careful evaluation of the individual clinical situation.	因此，通过系统应用强效激素，4/5 患者白癜风进展期可以被抑制。但是系统应用激素可能产生相关副作用，所以对于局限型白癜风进展期，专业的皮肤科医师必需在经过仔细评估个体的临床表现后，才能决定是否应用系统激素治疗。
Question13. Depigmentation: when and how?	问题 13. 何时 ,如何脱色素?
•Key points	•要点
•If, after consistent treatment(s) for vitiligo, satisfactory repigmentation is not achieved, one can consider depigmentation to avoid the skin color contrast.	•如果经过持续的白癜风治疗，没有达到满意的复色，患者可考虑脱色素来避免肤色反差。
• Chemicals, such as hydroquinone and monobenzone, have been used as topical agents, with increasing doubts as for their safety profile.	•化学剂，例如氢醌和莫诺本宗, 已被用来作为此类治疗的外用制剂，但是对其安全性的质疑越来越多。
•Many types of lasers (including Q-switched, alexandrite and Ruby Laser) have been used successfully alone or in combination with topical chemical depigmentary agents.	•多种类型的激光（包括 Q 开关、翠绿宝石和红宝石激光）单用或与外用化学脱色剂联合应用。
Cryotherapy has been used with promising results, but pigment recurrence is always possible.	•应用冷冻疗法有望有效，但也只是有可能会出现色素的恢复。
•Answer	•解答
Depigmentation is an option for vitiligo management that can be used when all repigmentation treatments have failed. The scope of cutaneous depigmentation is to reach a uniform (white or very fair) skin color.	脱色素是当所有复色治疗均失败时应对白癜风的一种选择，目标是达到肤色的均匀。

Depigmentation is a process that destroys the remaining cutaneous melanocytes in the skin: patients should be aware that they will stay for the rest of their life with the skin that is not "their own skin".	脱色素是损毁皮肤中残存的黑色素细胞，患者必须知道他们脱色之后的肤色将会伴随他们余生。
It may happen that one cannot cope with extreme photosensitivity.	可能会出现无法应对的极度的光敏感。
The ideal candidates for depigmentation are adult patients with few residual dark spots scattered over the face or on other visible areas of the body.	进行脱色素治疗的理想患者是仅有少数深色斑点散在分布于面部和身体其他可见部位的成年人。
Children should not be considered eligible for depigmentation treatments.	儿童不考虑脱色素治疗。
## Question 14. What are the individual factors associated with propensity to vitiligo?	## 问题 14. 与白癜风倾向相关的个人因素有哪些？
•Key points	•要点
•Heridity: 20% of people with vitiligo report about a first degree relative as the one suffering from vitiligo.	•遗传：20%的白癜风患者的一级亲属中有人患白癜风
Human Leukocyte Antigen (HLA) haplotype may contribute to vitiligo susceptibility.	•人类白细胞抗原(HLA)单倍型可能导致白癜风易感性
•A number of pathological conditions have been associated with vitiligo: their presence might be considered a propensity to disease development.	•许多病理状态与白癜风相关：其被认为可能是疾病发展的诱因
•The disease onset is frequently associated with stressful life events.	•白癜风发病多与应激性生活事件有关
•Physical trauma of the skin may induce vitiligo (Koebner phenomenon).	•皮肤的物理创伤可引起白癜风（同形反应）

Answer	解答
It is well-known that heredity is an issue in vitiligo propensity. In fact, around 20% of people with vitiligo report about a first degree relative as the one suffering from the same disorder. Children of a vitiligo affected subject have a 1.7-fold increased risk of developing vitiligo compared with other family members. HLA haplotypes may contribute to generalized vitiligo susceptibility, i.e. HLAs -A2, -DR4, - DR7 and -DQB1 0303.	众所周知，遗传是白癜风的一个易患因素。约 20%的白癜风患者称他们一级亲属中有人患有白癜风。白癜风患者的子女的白癜风患病风险比其他家庭的子女增加了 1.7 倍。人类白细胞抗原单倍型可能增加泛发型白癜风的易感性，如 HLAs-A2，-DR4，-DR7and -DQB1 0303。
NALP-1 gene (NACHT leucine rich- repeat protein 1) is a major susceptibility gene that is epidemiologically linked to generalized vitiligo and other autoimmune diseases (i.e. thyroid disease, pernicious anemia, and lupus erythematosus).	NALP-1 基因（NACHT 富亮氨酸重复蛋白 1），从流行病学上来说，是与泛发型白癜风及其他自身免疫病（如甲状腺疾病、恶性贫血和红斑狼疮）相关的主要易感基因。
Patients already affected by the following diseases are more prone to develop vitiligo (and vice versa):	患下列疾病的患者更容易发展成白癜风（反之亦然）：
Alopecia areata Pernicious anemia IgA selective defect	斑秃、恶性贫血、IgA 选择性缺陷
Thyroid autoimmune disease	自身免疫性甲状腺疾病
Addison’s disease	Addison 病。
Congenital melanocytic neviMELAS syndrome (mitochondrial encephalomyopathy, lactic acidosis, and stroke episodes syndrome).	先天性黑素细胞的 neviMELAS 综合征（线粒体脑肌病、乳酸中毒、中风发作综合征）
Stressful life events, probably interfering with the psycho-neuro-endocrine-immune system, and physical traumas of skin, including solar burns, may easily promote vitiligo onset in predisposed subjects.	应激性生活事件可能干扰心理-神经-内分泌-免疫系统；另外皮肤物理性损伤，包括日光灼伤，很容易诱发易感染人群发生白癜风。
## Question15. Surgical therapy for vitiligo: when and how?	## 问题 15 手术治疗白癜风：何时以及如何治疗？
•Key points	•要点

•Surgical therapy is usually introduced when medical or physical treatments of vitiligo fail.	•当药物或物理治疗白癜风无效时，常引入手术治疗。
•It consists of introducing melanocytes from pigmented skin area onto the white patches of the same subject.	•手术包括从患者有色素的皮肤处取自体黑素细胞植入白斑处。
• Many different treatments are available including simple skin punch grafting, split thickness grafting, blistering, roof grafting and the most sophisticated melanocyte or keratinocyte-melanocyte suspensions.	•许多不同的治疗方法可行，包括单纯皮肤打孔移植，皮片移植术，发疱移植，顶部嫁接，和最尖端的黑素细胞或角质形成细胞-黑素细胞悬浮液技术。
•Graft failure, scarring, infection, irregular pigmentation, cobble stoning and the vitiligo kobnerization phenomenon are always possible and limit the use of surgery in vitiligo.	•移植失败、疤痕、感染、不规则色沉、鹅卵石样变和白癜风的同形反应都可能发生，这些限制了手术治疗的应用。
•Answer	•解答
The surgical option in the treatment of vitiligo is always possible, at least on selected/limited depigmented areas.	手术治疗白癜风是很有可能的，至少在选择性/局限性的色素脱失区域是可行的。
Two main conditions are required:	需具备两个主要条件：
— the white vitiligo lesion to be treated should be stable (i.e. avoid surgical procedures in lesions which are progressing – no progression of lesions or appearance of additional depigmentation must be evident for at least 2 years).	白癜风皮损需处于稳定期（避免在进展皮损上进行手术——无皮损进展或新增的色素脱失斑明显变白至少两年）
— the white area should be recalcitrant to the main and most effective medical and physiotherapeutic UV-based treatments (lights or lasers).	白斑对主要的、最有效的药物治疗和以紫外线为基础的物理治疗（光、激光）抵抗。
A number of surgical procedures are possible. Among these are the following:	有许多可行的手术方式，主要如下：
— punch grafting and mini-grafting	—打孔移植和微小移植
— epidermal grafting	—表皮移植
— dermo-epidermal grafting	—真表皮移植
— suction blisters grafting	—负压吸疱移植术
—autologous melanocyte suspension transplant	—自体黑素细胞悬浮液移植

— treatments with tissue - engineered skin	—组织工程皮肤治疗
— cultured epidermis with melanocytes	—人工培养的含黑素细胞的表皮
These are considered to be the most popular procedures.	这些是最常用的手术方式
Neo-melanogenesis usually begins shortly after melanocyte graftings or transplantation and continues for a few months at a slow rate.	新的黑素形成通常在黑素细胞嫁接或移植后很快开始，然后以缓慢的速度持续几个月。
UV exposure (with lamps or natural sunlight) induces faster and deeper repigmentation after surgery. Surgical techniques offer repigmentation that is not often comparable with normally pigmented skin. They are always invasive procedures. Final results vary considerably from patient to patient.	术后紫外线暴露（灯光或自然光）可加快、加深复色。手术治疗后的复色常不同于正常着色的皮肤。这常是一个浸润的过程。最终结果不同个体之间差异很大。
The psychological aspect of the subject who requires surgical/invasive procedure must be always evaluated and patient's expectations must be clearly discussed.	对要求手术/侵入性治疗的患者的心理，需要进行长期评估，患者的期望应明确探讨。
Thus, the decision to start a surgical procedure for vitiligo must be always a well-balanced and informed decision.	因此，手术治疗白癜风必须是平衡利弊、完全知情后的一个决定。
Question16. Tattoo for vitiligo patches: when and how?	**问题 16. 白癜风的纹身治疗：何时以及如何治疗？**
•Key points	•要点
• Cosmetic tattoo represents the standard treatment for achieving permanent camouflage in vitiligo areas.	•美容纹身代表了对白癜风区域实现永久的遮盖的标准治疗。
•It is especially helpful for mucosal vitiligo.	•这对黏膜白癜风尤其有效。
•Adverse effects must be considered.	•需考虑不良反应。

•Answer	•解答
Tattoo have been and are worn by the general population for ritual or symbolic reasons. It consists of introducing micropigments into dermis, i.e. inerting iron oxides which are unable to migrate. The micropigment implanted into skin cannot be washed off, but its colors fade naturally in 24-36 months.	过去和现在，普通人群因宗教原因或因其象征意义绘有纹身。纹身是在真皮注入微颜料，即无法迁移的惰性铁的氧化物。植入皮肤的微颜料将无法被洗掉，但颜色会在24-36个月内自然褪色。
Cosmetic results depend on doctor's or technician's skill in matching the color of the tattoo with the color of the surrounding normal skin.	美容的效果有赖于医生或技术员匹配纹身颜色和周围正常皮肤颜色的技巧。
Dark skinned people usually have better results than fair-skinned individuals.	肤色深的人通常比皮肤白皙的人效果好。
Some adverse effects that have been reported include recurrences of herpes simplex infection, chronic granulomatous reactions to implanted pigments, allergic reactions, koebnerization, imperfect color matching and also, in our experience, cutaneous pseudolymphomas.	已有报道的不良反应有反复单纯疱疹病毒感染，植入颜料的慢性肉芽肿性反应、过敏反应、同形反应、颜色匹配不当，在我们的经验中还出现过皮肤假性淋巴瘤。
## Question 17. Should I take topical or oral antioxidants for vitiligo?	## 问题 17. 应该局部外用或口服抗氧化剂治疗白癜风吗？
•Key points	•要点
•There is some growing evidence supporting oral antioxidants supplementation, specifically associated with UVB irradiation of the skin.	•有越来越多的证据支持补充抗氧化剂，尤其是联合 UVB 照射皮肤。
•There are no defined dosing parameters and side effects profiles studies on antioxidants oral supplementation in vitiligo subjects.	•尚没有关于白癜风患者口服抗氧化剂的剂量参数和副作用的资料研究。

• Polypodium Leucotomos (a fern of the American subtropics) , Ginkgo Biloba, cucumis melo, alpha lipoic acid, vitamins C and E, polyunsaturated fatty acids, phenylalanine and other natural substances have been orally consumed with the purpose of elevating systemic catalase activity in the blood and, thus, decreasing the levels of reactive oxygen species. Recently, curcumin alone, or in combination with capsaicin and resveratrol, has been shown to affect vitiligo actively.	•水龙骨（美国亚热带的一种蕨类植物）、银杏、甜瓜、α-硫辛酸、维生素 C 和 E、多不饱和脂肪酸、苯丙氨酸及其他天然物质已被用于口服，旨在提高全身过氧化氢酶的活性，从而降低活性氧化物的水平。目前，姜黄素单独使用或结合辣椒素、白藜芦醇使用已显示可对白癜风产生积极影响。
•Answer	•解答
There is a clear inclination of the experts in the field of vitiligo research towards considering the appearance and progression of white patches as being related to a global imbalance in the activity of the scavenger mechanism (s), which decreases the levels of reactive oxygen species (ROS), both in blood and in skin of the vitiligo patients.	白癜风领域的专家对于这一理论——白斑的出现和发展与清道夫机制作用过程中的总体失衡相关——有一个明确的倾向。通过清道夫机制，可降低白癜风患者皮肤和血液中的活性氧化物水平。
Thus, both local and systemic use of substances that are able to decrease the levels of reactive oxygen species have been repeatedly proposed.	因此局部外用和口服降低活性氧化物的物质一直被反复提倡。
Most of these substances are mentioned in the Key points section of this paragraph.	大多数物质已在本节要点中提及。
In general, while some studies show remarkably good results in repigmentation after the use of local or systemic “natural antioxidants”, other studies show no benefits.	总体来说，部分研究表明局部或系统使用“天然抗氧化剂”对复色有显著效果，但仍有部分研究表明其无效。
The Dermatological Scientific Community seems to encourage both oral and local use of the “natural antioxidants” for treating vitiligo.	皮肤科学委员会倾向于推荐口服和外用“天然抗氧化剂”治疗白癜风。
Nevertheless, defined dosing parameters, double-blind consistent studies on efficacy and safety profiles of these natural substances have yet to be clarified.	然而，这些天然物质确切的剂量参数、关于其有效性和安全性的资料的双盲一致的研究还有待进一步阐述。

A book on "Natural Antioxidants in General Medicine and in Dermatology" co-edited by the present Authors will be available soon for the VRF audience.	由本文作者合作编辑的"全科医学和皮肤病学中的天然抗氧化剂"一书即将面世。
## Question 18. What does " treating vitiligo with catalase" mean?	## 问题 18. "过氧化氢酶治疗白癜风"意味着什么？
•Key points	•要点
•Established medical treatments for systemic vitiligo are usually chosen for inducing local and/or systemic reduction of the immune system (=immune depression).	•已确立的治疗全身性白癜风的方案主要通过抑制局部和/或系统免疫反应（即免疫抑制）。
•An alternative therapeutic option is based on the concept that instead of inducing local and/or systemic immunodepression in vitiligo subjects, one can introduce substances rich in catalase activity in order to protect melanocytes against the excessive oxidative stress.	•另一种治疗选择是基于以下理念：在白癜风患者体内引入富含过氧化氢酶活性的物质，从而保护黑素细胞对抗过度的氧化应激，而不是引起局部和/或系统的免疫抑制。
•Answer	•解答
Catalase is a substance well-known for its antioxidant properties.	过氧化氢酶是一种因其抗氧化特性而被熟知的物质。
It belongs to the group of oral and local antioxidants, which have been listed and discussed in the previous chapters. The subject is exhaustively discussed in the book "Natural Antioxidants in General Medicine and in Dermatology" , available as e-book for the VRF audience.	它属于口服和局部外用的抗氧化剂，已经在之前章节列举和讨论过。在"全科医学和皮肤病学中的天然抗氧化剂"一书中将有详尽的阐述，VRF 观众将获得本书的电子版。
This substance is usually of natural origin and its use is combined with ultra violet irradiation of the skin.	过氧化氢酶通常来源于天然物质，它需与皮肤紫外辐射联合应用。

The Dead Sea climatotherapy associated with topical pseudocatalase seems to be as effective as the use of potent local corticosteroids in inducing repigmentation.	联合局部外用假性过氧化氢酶的死海气候疗法在复色方面似乎与局部外用强效糖皮质激素有同等疗效。
Thus, this issue should be discussed by the patients with their dermatologist before staring any active treatment with chemical drugs, which induce immune depression, keeping in mind that unfortunately defined dosing parameters and possible side effects have not been fully elucidated yet for those substances with catalase activity.	因此，在开始任何可引起免疫抑制的化学药物治疗前，患者和皮肤科医生之间应就此问题协商，牢记这些具有过氧化氢酶活性的物质的确切剂量参数和可能的副作用并未被充分阐明。
## Question 19. What are the main side effects of vitiligo treatments?	## 问题 19. 白癜风治疗的主要副作用
•Key points	•要点
•Topical and systemic treatments of vitiligo may have different side effects in different subjects.	•局部和系统治疗白癜风，在不同患者副作用不同。
•Topical potent corticosteroids are considered to be first-line therapy. Erythema, acne-form lesions, atrophy of the epidermis, teleangectasia, striae distensae and increased hair growth are commonly reported.	•外用强效糖皮质激素是白癜风的一线治疗。常被报道的副作用为：红斑、痤疮样皮损、表皮萎缩、毛细血管扩张、膨胀纹和毛发生长的增强。
•Topical calcineurine inhibitors (Tacrolimus, Pimecrolimus) commonly induce erythema, burning, and irritation. In spite of some circulating information, to date there is no convincing evidence suggesting that there is any increase in skin cancer after their use in vitiligo subjects.	•外用钙调磷酸酶抑制剂（他克莫司、吡美莫司）常引起红斑、烧灼感和皮肤刺激。尽管有些流传信息，但目前为止没有令人信服的证据表明这些药物的使用会增加白癜风患者的患皮肤癌的机率。
•Vitamin D3 analogs may only produce mild irritation on the treated skin.	•维生素 D3 衍生物仅在治疗皮肤上产生轻微刺激反应。
•Topical psoralens are highly phototoxic even in very low concentrations after UV exposure: blistering and skin necrosis may be seen.	•外用补骨脂素具有很高的光毒性，即使用很低的浓度，在紫外光暴露后也可能会出现皮肤起疱和坏死。

•Answer	•解答
Treatment of vitiligo is a complex issue which always requires a clear and exhaustive explanation of side effects of both systemic and local treatments.	白癜风的治疗是一个复杂的问题，要求对系统和局部治疗的副作用都作出明确和详尽的解释。
Each vitiligo patient should ask the dermatologist about the length of the treatment(s) as well as possible side effects.	每一个白癜风患者都需向皮肤病医生咨询治疗时间的长短和其可能的副作用。
The discussion of any systemic treatments of vitiligo requires always a discussion in private between the vitiligo patient and her/his dermatologist in a most empathic and cooperative setting based on clear questions and clear answers.	对任何白癜风的系统治疗的讨论，都应是患者和皮肤病医生之间私人的、在感情移入交流和协作状态下，基于明确的问题和答案的讨论。
Hopefully, this mini-book will help the patient(s) in rising clear answers to the dermatologist to achieve better understanding and treating vitiligo.	衷心希望，这本迷你书会帮助白癜风患者向皮肤科医生提出明确的问题，从而促进理解和治疗。
## Question 20. Camouflage: when and how?	## 问题 20. 掩饰疗法：何时以及如何进行？
•Key points	•要点
•Cover-ups should be considered in global approach to vitiligo, mainly in those cases when vitiligo subjects cannot overcome the emotional stress deriving from their skin change.	•遮盖应该是被视为治疗白癜风的通用方法，尤其是在白癜风患者难以克服来自皮肤改变引起的情绪压力的情况下。
• Corrective cosmetic products used for camouflage can include cover creams, instant self- tanning topicals, stains and dyes.	•用于掩饰的矫正性的化妆产品包括：遮盖霜、即时自身晒黑剂、着色剂和染料。
• Camouflage can be just temporary (make-up), semi permanent (self-tanning topicals) or permanent (tattoo).	•掩饰可以是暂时的（化妆），半永久性（即时自身晒黑剂）或永久性（纹身）。
•Camouflage and active treatments for vitiligo may be combined.	•掩饰和积极治疗联合应用于白癜风。

Answer	•解答
Most therapies for vitiligo may require treatment periods lasting for months or years before repigmentation eventually occurs.	大部分的白癜风治疗需持续数月或数年后才出现复色。
Thus, palliative treatments could be used in the meantime, with considerable improvement in quality of life of vitiligo-affected subject .	因此，在治疗期间可应用姑息治疗，这对白癜风患者的生活质量有相当大的提高。
Sunscreens are usually added to most of those cosmetic products in order to avoid sunburn.	为避免晒伤，常在这些化妆产品中加入遮光剂。
The vitiligo patients should know how many different topicals are available for them on the market, and should become familiar with different methods of application and cleaning.	白癜风患者应了解市场中有哪些不同外用制剂对她/他们是可用的，并熟悉不同的使用和清洗方法。
Cover creams, stick correctors, tinted cover creams and fixing spray applications on the vitiligo-affected areas require expert recommendations in order to get optimal results.	白癜风皮损处使用的遮瑕霜、修复棒、带颜色的遮瑕膏、修复喷雾应由专家推荐，以取得最佳效果。
Permanent camouflage is obtained with cosmetic tattoo, usually done by implanting iron oxides pigments into the dermis.	要获得永久性的掩饰，可以使用美容纹身，通常是在真皮植入氧化铁染料。
Colors of the tattoos naturally fade over years, thus, they require periodic maintenance, usually every 30 months.	纹身的颜色会随时间逐渐自然消退，所以，通常需要每 30 个月进行定期修复。
The quality of life of vitiligo subjects is usually improved significantly by use of cover-ups, which can temporarily cancel vitiligo areas and give vitiliginous skin a natural color.	通过掩盖，可暂时消除白斑，并且让白斑处皮肤呈现自然肤色，白癜风患者的生活质量常能因此得到显著改善。
Unfortunately, reliable clinics devoted to knowledgeable application of camouflage in vitiligo are not always available.	遗憾的是，不是总能有可靠的诊所专门提供齐全的掩盖技术。

Question21. Psychotherapy: when and how?	问题 21. 心理治疗：何时以及如何治疗？
•Key points	•要点
•Vitiligo is a distressing disease because of its perceived stigma, cosmetic disfiguration and tendency to chronic relapse.	•白癜风是一种令人极其痛苦的疾病，因其令人感觉耻辱、损毁容貌，并且有慢性复发的趋势。
In certain cases treatment of psychological rebound may both improve the self-esteem and clinical outcome: this must be started in the “liaison consultation” room where the subject will be simultaneously in contact with the dermatologist and the psychotherapist.	•在某些情况下，精神心理的振作可同时增强患者自尊心并促进临床症状恢复：这种治疗必须在患者可以同时接触皮肤科医生和心理治疗师的“联络咨询”室进行。
• Cognitive behavior therapy may be appropriate in certain cases.	•某些情况下可进行认知行为治疗。
•Answer	•解答
Vitiligo is often considered to be emotionally triggered, both by the affected subjects and doctors.	人们常认为白癜风是被患者和医生的情绪所引发。
An incubation period of 2-3 weeks between the stress event and the clinical manifestation of vitiligo patches is reported by over 70% of patients.	超过 70%的患者称在应激事件和出现白癜风临床表现之间有 2-3 周的潜伏期。
Even the localization of white patches has been anecdotally but significantly reported as related to specific affective relationships.	甚至白斑的位置与特定情感关系有关，这也被当做趣闻但又确切报道过。
Thus, according to some reports, men who had been betrayed developed vitiligo on the genital areas and women who did not accept their pregnancy, developed vitiligo on their abdomens.	因而，根据一些报道，遭受背叛的男人在生殖器部位会出现白癜风，而不能接受自己怀孕的女人白癜风发生在腹部。

The case of a woman who developed vitiligo on hands in a few hours after cleaning the sheets where her son's girlfriend had had a miscarriage, is also illuminating.	一个案例中，一位妇女在清洗了她儿子女朋友有过流产的床单数小时后，在手部发生白癜风，这也具有一定启示性。
These are obviously anecdotal reports in medical literature, which are of very limited "per se" value, but are clearly disclosing possible general psycho-somatic paths, which could direct researchers toward the causes and to the cure of vitiligo, in as yet un explored psycho - neuro - immuno endocrine territories.	在医学文献中有些明显的轶事报告，具有有限的"灰色"价值，但是清楚地揭示了可能的普遍的心理-躯体途径，将可能在未被探索的心理-神经-免疫内分泌领域，指导研究者探索白癜风的起因，从而治愈白癜风。
Nobody can ignore the burden of the somato-psychic rebound effect of vitiligo into the psyche of the affected subject.	无人能够忽视躯体-心理的反弹效应对白癜风患者造成的心理负担。
Vitiligo subjects may adopt (more or less consciously) different behaviors to cope with vitiligo.	白癜风患者会采取（或多或少有意识地）不同的行为应对白癜风。
Some will adopt the "mastery active" psychological mechanism consisting of reading, studying and researching actively the causes of the disease.	有些人会采取"主动掌握"的心理，包括阅读、学习并主动研究病因。
Others will behave as "natural acceptors" showing good self-esteem and not trying to hide their skin lesions.	一些人表现为"自然接受"，表现出良好的自尊心，并不去试图掩盖皮损。
Others instead will make heroic attempts to hide their white spots, will be always embarrassed and often depressed. These subjects could limit their social contacts and could lose their jobs because of vitiligo.	一些人会尝试掩盖白斑，也经常会感到尴尬和苦闷。这些人可能会减少社交，及因为白癜风而丢掉她/他们的工作。
While examining any vitiligo subject and discussing therapeutic options, the skilled dermatologist will try to understand both the possible psycho-somatic mechanism inducing the appearance of vitiligo patches (if any) and the somato-psychic rebound effect of the disease on self-esteem and thequality of life of each individual subject.	在为白癜风患者做检查及讨论治疗方案时，有经验的皮肤科医生会尝试了解引起白斑的可能的心理-躯体机制（如果有的话），及疾病的躯体-心理反弹效应对患者个体自尊心和生活质量的影响。

Thus, should the dermatology always or often refer each and every vitiligo patient to the psychologist or the psychiatrist?	那么，皮肤科医生总要或者经常要让每位白癜风患者去找心理治疗师或精神科医生吗？
Hard to say no, but it is harder to say yes.	很难说不，但更难说是。
If the vitiligo patient has chosen the dermatologist for “superficial and deep” assistance regarding understanding of his/her surface and depths, the dermatologist cannot give up.	如果白癜风患者寻求皮肤科医生作为理解他外在困扰和内心困扰的援助者，皮肤科医生将不能放弃。
The dermatologist must always respond to the request of the patient by giving the complete care requested, including supplying proper counseling.	皮肤科医生必须始终响应患者的要求，提供完整的护理需求，包括提供适当的辅导。
“Forcing” the patient to visit another (non-skin) specialist is, in fact, dangerous.	事实上，“强迫”患者去其他（非皮肤科）专家处就诊是危险的。
Immediate insensitive referral of skin patients to a psychiatrist can even lead to ideas of suicide in over sensitive subjects, as has already been reported in literature.	有文献曾报道，直接冷漠的让皮肤病患者转诊去看心理医生，会让一些过度敏感的个体产生自杀的想法。
Thus, when a psycho-intervention is be considered “necessary”, the dermatology should use the “liaison consultation” practice of getting the patient into close collaboration with the psychiatrist-psychologist. It is direct connection of two to one: the vitiligo subject, the dermatologist and the psychiatrist.	因此，当认为有必要采取心理干预的时候，皮肤科医生应该使用“联络咨询”的作法，以此使患者与精神病学家–心理学家形成密切合作。这是二对一的直接联系：白癜风患者、皮肤科医生和心理医生。
Only later, can the two experts have the full right to treat the same patient separately, with expected excellent results.	只有在此之后，两位专家才能有充分的权利单独对患者进行治疗，才能得到预期的良好效果。
In this context, it seems that cognitive behavior therapy could give fair results in contrast to different psychiatric or psychological approaches.	在这种情况下，对比不同的精神或心理的方法，认知行为治疗似乎可以取得良好效果。

Future trends. New concepts in vitiligo treatment	未来趋势：白癜风治疗新概念
Key points	•要点：
•Is vitiligo a single disease and will the cure be identified as such?	•白癜风是独立的疾病？其治疗也是作为独立疾病而开展的吗？
• Or, conversely, does vitiligo include a spectrum of different disorders with different causes, all manifested by white patches on skin but requiring different treatments?	•或反过来说，白癜风包括一系列不同原因引起的不同的疾病，它们都表现为皮肤上的白色斑块且需要不同的治疗方法？
•Will genetic studies lead us to discovering the cure for vitiligo?	•遗传学研究可以使我们发现治疗白癜风的方法？
• Will vitiligo patients have access and financial support to cope with the inherent costs of effective treatment modalities?	•白癜风患者能够获得经济来源从有效的治疗方法中受益吗？
•What will be the role of Cloud Medical Research Management (MRM)?	•云医学研究管理（MRM）能带来什么？
• What's new on the horizon of vitiligo therapy and cure?	•白癜风治疗和治愈的方面的新希望？
•Answer	•解答：
This is the only section of this booklet in which all key point sentences are followed by a question mark.	这是此手册中唯一一个所有的要点都是问号结尾的章节。
The statement "the cause of vitiligo still remains unknown" should always be followed by the sentence "because in each and every vitiligo patient a different process may be involved in the production of white patches on the skin".	"白癜风病因仍不明确"这句话后总要跟一句"因为每一个患者皮肤白斑产生的过程都可能不同。"
In other words, the same white spots on the skin of different subjects, diagnosed by the dermatologist as "vitiligo" are most probably related to several different mechanisms affecting melanin production, release and removal in the skin. "Vive la difference!	换句话说由皮肤科医生诊断为"白癜风"的不同个体的相同的皮肤白斑，其皮肤色素的产生、释放和清除很可能是受多种不同机制影响。

As such, there may not be one form of "vitiligo", but more forms of "vitiligos" affecting different subjects, and all manifested similarly or identically as white patches on skin and/or on mucosal areas.	因此或许白癜风不只有一种形式，而是存在更多种形式的“白癜风”影响不同的个体，而其表现为相似或相同的皮肤或粘膜白斑。
This concept excludes "leukodermas", i.e. those white patches of the skin of known origin.	这种观念不包括“皮肤白斑病”在内，例如那些已知病因的皮肤白斑。
It is implicit that different forms of vitiligo will require different treatments and, eventually, different cures.	这提示不同类型的白癜风需要不同的治疗方式，最终预后不同。
It is also implicit that today, "combined treatments" are the most rational choice for treating any individual case.	这也提示了当今“综合治疗”对于任何病例都是最合理的。
It is hard to say if genetic studies will lead to the direct discovery of a vitiligo cure. Most probably, this will not happen soon. Identical twins with identical DNA have only 23% concordance of developing vitiligo, suggesting a significant environmental and non-genetic component of the disease.	目前还很难说遗传学研究可以直接发现治愈白癜风的方法。最可能的是这不会很快发生。具有相同基因的双胞胎同时发展为白癜风的仅占 23%，这说明环境和非遗传因素对白癜风有重要影响。
Genetics will probably help us in identifying different sub-populations of the subjects affected by "white patches on skin and/or mucosal areas" and diagnosed by dermatologist as "vitiligo" which will need different investigations, different treatments and probably completely different cures. This could be the best current goal of genetic testing in vitiligo subjects, with excellent perspective. In addition, genetics might be helpful in predicting treatment success, thus, allowing to choose the best therapy for a particular individual.	遗传学研究可能帮助我们区分发生皮肤/黏膜白斑的不同亚群，协助医生诊断白癜风，采取不同的治疗手段并可能达到完全不同的预后。这是目前白癜风患者遗传检测的最佳目标，有很好的前景。此外，遗传学研究可能对于预测治疗效果有帮助，从而对特定的患者可以选择最佳治疗手段。
The cost and accessibility of therapy must be considered when choosing a treatment plan for vitiligo. Presently, a vast majority of the vitiligo subjects have heavy financial limitations for proper treatment according to already existing treatment protocols.	当选择治疗计划时，治疗的花费和可行性必须考虑。当前绝大多数白癜风患者选择合适的治疗方案都会带来较为沉重的经济负担。

This problem will probably become more acute in the nearest future, due to the progressive recession in the economy of many countries and relative increase of the cost of the effective treatments for vitiligo.	由于许多国家经济衰退和白癜风有效治疗的相关费用增加，这个问题会在近来变得更加严重。
Thus, on the horizon of vitiligo therapy and possibly of vitiligo cure we see a complex interaction of different overlapping factors, including identification of the specific form of vitiligo (classification and genetics), evaluation of the inherent biological pathways that have produced white skin patches in any individual case (pathophysiology) and, finally, selection of the proper treatment (and hopefully, cure).	因此白癜风的治疗效果是受多因素交叉影响相互作用的，其中包括识别白癜风的具体表现形式（分类和遗传学），评估每个病人产生皮肤白斑的内在的生物途径（病理生理学），最终选择适当的治疗（期望治愈）。
This last issue is already showing (and probably will more in the future) how cost and accessibility of therapy must be considered when dealing with a lifelong disease which “democratically” affects all populations in the world.	最后一个议题是（未来或许更明显）白癜风这个对所有人群都可能罹患的慢性疾病，必须要考虑花费和治疗的可行性。
Most of the affected subjects will have financial limitations to accessing proper treatment/cure of «their» vitiligo.	大多数白癜风患者在接受合理的治疗上有经济困难。
On the horizon of vitiligo therapy and cure we see a complicated puzzle with some essential building blocks already well positioned and installed in the correct places.	白癜风治疗和治愈问题是一个复杂的难题但我们对其已有正确的基本认识。
As to the rest, the Scientific Community, Vitiligo Patients Associations and the Foundations devoted to vitiligo are requested to coordinate and harmonize their strategies and efforts towards winning the battle against vitiligo, by completing the puzzle.	完成这一难题剩下的部分需要科学界、白癜风患者协会，白癜风基金会共同联手，献计献策，努力攻克白癜风，解决这一难题。
The Vitiligo Research Foundation (www.vrfoundation.org; www.vitinomics.net) is committed to keep you always informed about ongoing research and treatments available for vitiligo.	白癜风研究基金会（www.vrfoundation.org；www.vitinomics.net）致力于让您了解白癜风正在进行的研究及治疗进展。

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Vitiligo. Questions and Answers.

Part 2 by Prof. Antonio Salafia, MD

Introduction

Vitiligo is an acquired skin pigmentation disorder, which causes both physical defect and psychological distress in patients, more often in dark-skinned individuals. It has been known for several thousands of years. Apart from aesthetic changes, vitiligo is not life-threatening or contagious. However, it can change a patient's quality of life.

Vitiligo is a multifactor disease, i.e. many factors are involved in causing this disease. Some authors think that it is hereditary, but there is no definite proof for it. I agree that in some patients, there might be a congenital predisposition to the disease, but it will be discussed in detail later. Occasionally, there may be other diseases associated with vitiligo, however, it is rather an exception than the rule. At the same time, similar to many other diseases, there can be accompanying ones.

Chapter 1.

Introduction. Skin color

The normal skin color appears to be the dark one; the light color is a mutation. There are more genetic differences in the African race than in the White race, and there is a larger range of hues in "darks" than in "whites"; this also speaks in favor of the theory that "Black hair, brown eyes and dark skin must be considered the primordial state for humans".

白癜风问答

Part2 Antonio Salafia 教授，医学博士

引言：

白癜风是一种获得性皮肤色素异常，更常见于黑皮肤的人群，它给患者带来身体上的影响和心理上的苦恼。它已经有几千年历史。除了影响美观，白癜风没有生命危险或传染性，然而它确可以影响患者生活质量。

白癜风是一种多因素疾病，许多因素可以引发这个疾病。一些作者认为这是遗传病，但目前没有确切的证据。我同意某些病人可能先天易患白癜风的观点，这会在后面详细讨论。偶尔也有其他疾病与白癜风相关，但那是偶然而非常规。同时，与其他疾病相似，白癜风可以伴发其它疾病。

第 1 章　引言 皮肤颜色

正常的皮肤颜色外观应当是较深的，而较浅的皮肤颜色是基因突变的结果。与白种人相比，非洲各族的基因差异更大，同时“黑人”比“白人”肤色遗传变异范围更广。这也支持“黑头发，棕色眼睛，黝黑的皮肤被认为是人类的原始状态”的理论。

Final skin color is determined by interaction of four pigments:	最终皮肤颜色是由四个色素相互作用决定的：
a) Yellow: produced by carotenoids (called as they are found in large quantities in carrots).	a）黄色：由类胡萝卜素产生（因为其在胡萝卜中大量发现而命名）。
b) Brown: due to melanin.	b）棕色：黑色素的缘故。
c) Red: this is the color of oxygenated hemoglobin in capillaries.	c）红色：毛细血管中氧合血红蛋白的颜色。
d) Blue: the color of hemoglobin – with less oxygen — in venules.	d）蓝色： 在静脉内结合较少氧的血红蛋白的颜色。
Among these, melanin is the major component of skin color, which depends on the number, type, and distribution of melanosomes and even their size.	其中，黑色素是皮肤颜色的主要组成部分，肤色取决于黑素细胞的数目、类别、黑素小体的分布甚至是大小。
Other elements contributing to skin color include: thickness of the skin, of its top layer in particular, the velocity of blood flow, oxygenation level of the circulating hemoglobin and exposure to UV light. Finally, the color of skin depends not only on the production of melanin, but its transport, too. Any cell capable of producing melanin can be called a melanocyte, but in current use, the name melanocyte is used for those cells that originate from the neural crest (the area in the fetus from which the spinal cord develops) and possess tyrosinase enzyme.	影响皮肤颜色的其他因素包括：皮肤厚度（特别是皮肤浅层）、血流速度、循环血红蛋白氧合水平和暴露于紫外线的程度。另外，皮肤颜色不仅取决于黑色素的产生量，更与其运输有关。任何可以产生黑色素的细胞都可被称作黑素细胞，但在当前，黑素细胞的名称仅用于起源于神经嵴（胎儿脊髓发生的位置）并有酪氨酸酶活性。
We already know that hair acts as a depot for melanocytes and, clinically, we notice that hairy parts of the body undergo regimentation earlier and faster. Melanocytes are not equally distributed in all anatomical areas of the same individual. There are between 1,000 and 3,000 melanocytes per one square mm of skin area, with higher density in forehead, cheeks, nasal skin, face, lips, penis and scrotum. Thus, it is evident that areas that contain more melanocytes have better chances for earlier regimentation than those with lower melanocyte concentration.	我们已经知道毛发扮演着黑色素仓库的角色。在临床上我们观察到在身体多毛区，复色更早且更快。在同一患者的不同解剖部位黑素细胞分布并不相同。每平方毫米皮肤黑素细胞数目在 1000-3000 之间，前额、颊部、鼻部、颜面、唇、阴囊及睾丸密度更高。因此，显而易见的是，黑素细胞较多的区域比黑素细胞密度较低的区域更容易较早复色。

Blood supply is also related to the rate of repigmentation – as it has been already noted by Prota. Blood supply in fingers and toes is about 25% less than in other parts of the body. Our face has the highest blood supply and it is not surprising that almost in all patients it is their face that regiments the earliest and fastest.

正如 Porta 发现的，血液供应同样与复色速率有关。在手指和脚趾的血液供应比身体其它部位约少 25%，面部的血供最好，因而几乎所有的患者面部复色最早最快就不足为奇了。

Exposure to sunlight (or artificial UV light) increases skin color, and for this reason in case of vitiligo exposure to sunlight — in moderation — is not optional, but an integral part of treatment. Too much sunlight, however, can damage our skin, which will be discussed later.

暴露在阳光下（或人工紫外线光）可增加皮肤的颜色。白癜风暴露于适度的日光下有时不可避免，而光线也是治疗中不可分割的一部分。但过量的日光照射损伤皮肤，这将在后面讨论。

Chapter 2. The first question coming to mind: who gets vitiligo?

第 2 章　脑海中浮现的第一个问题：谁会患白癜风？

The answer is not simple or straightforward. At present, there is no sufficient evidence to say that the disease is more common in certain races, communities or geographical areas. One thing is certain: vegetarian and non-vegetarian diet does not make much of a difference, except that vegetarian diet may be poor in certain important vitamins. However, as I consider vitiligo to be primarily a metabolic disorder, the possibility that diet, fasting, intestinal parasitosis, and presence of any other metabolic disorder — like diabetes mellitus — can complicate and aggravate the problem. Let us examine various epidemiological parameters one by one.

答案并不是简单的或直接的。目前，并没有足够的证据指明本病多见于某些种族、群落或地区。有一件事是肯定的：在素食和非素食饮食者中没有太大的区别，除非素食者可能会缺乏某些重要维生素。我个人认为白癜风属代谢异常类疾病。就象不良饮食习惯、禁食、肠道寄生虫病和其他代谢性疾病，如糖尿病，会使疾病复杂化并加重。让我们来逐一检查各种流行病学数据。

To my knowledge, no systematic epidemiological studies have been done in vitiligo; most of the statistics are done by dermatologists and the percentages reflect one of vitiligo patients out of all dermatological cases.

据我所知，目前尚无关于白癜风的系统的流行病学研究，大部分的统计数据来自于皮肤科医生，其百分比来自于白癜风患者在所有皮肤病患者中的比值。

Therefore, we cannot be absolutely certain about the Prevalence (the total number of patients at any given moment) and Incidence (the number of new cases per year) of vitiligo in a given population.	因此我们并不能绝对确定在给定人口的白癜风患者的患病率和发病率。
Conclusions of the Epidemiologists are often biased by limited experience and/or relatively small number of patients examined.	而流行病学专家对此经验不足，其结论往往是基于相对数目较小的人群。
The prevalence is variously quoted at 0.5%-2.00% worldwide; 1% in the USA. It is said to be 1% in Europe, 4% in India, and 0.38% in Denmark.	在全世界范围内患病率在 0.5%—2.00%之间，美国 1%，欧洲 1%，印度 4%，在丹麦 0.38%。
Nobody knows how much these statistics are worth; there is exaggeration in both directions, by those who underestimate the problem and by the ones who overrate it.	没有人知道这些统计数据有什么意义，这些数据均存在高估和低估两个方向的夸大。
My statistics are also a percentage of all skin cases registered at Vimala Dermatological Centre (VDC), other charitable hospitals and my own consulting room. Due to the fact that my treatment is totally different from the one usually prescribed by other dermatologists, it happens that at VDC there is a different and effective treatment, which is true.	我的统计数据来自于在 Vimala 皮肤治疗中心（VDC）的皮肤病患者，其他慈善医院和我的诊室。我的治疗和多数皮肤科医生的常规治疗不同，而恰好 VDC 有有效的治疗方案。
As a consequence, I see a large number of vitiligo patients. Many records are lost due to various reasons, however, at present, on my computer I have complete records of more than nineteen thousand patients. About 20% of my patients are from various parts of India, and a few hundred are from abroad. Having evaluated the records of the previous 15 years, I can say that the prevalence is about 8% and the annual incidence is 11.7%. To reflect the national average, my statistics have to be downsized for the reasons just mentioned.	这样，我记录了大量的白癜风患者。然而，由于种种原因，许多记录丢失，目前在我的电脑有超过 19000 名病人的完整记录。我的病人约 20%来自于印度各地，有数百人来自国外。在评估过去 15 年的记录，我统计的患病率是 8%左右，年发病率是 11.7%。为反映全国平均水平，我的统计数据应当下调，因为数据来自皮肤病患者。

I consider prevalence of 4-5% a figure more close to the reality of India. However, it does appear that the incidence of vitiligo is increasing slowly but steadily for reasons yet unknown; I can venture to say that pathogenesis of vitiligo is contributed to by free radicals (as we'll see later), as well as pollution, adulterated food and edible oils, certain diets, stressful lif, and all of them may contribute to the frequency of the disease.

我认为患病率在 4—5%，这个数字更接近印度的真实水平。不过目前看来，白癜风的发病率正在缓慢且稳步的增加，但原因不明。我推测白癜风的发病是由于自由基（后面详细说明），以及污染、添加食品及食用油、特定的饮食、生活压力大等，所有这些都可能有助于该疾病的频发。

Chapter 3.
General prevalence

第 3 章　人群患病率

The prevalence in the general population depends on various factors:

总的人群患病率取决于以下因素：

1.Awareness of the patient and the doctor, level of patient's concern, which , in its turn, is influenced by the relatives, society on the whole, and the volume of patient's psychological trauma.

1. 病人和医生对白癜风的意识，患者的关注水平，反过来说受患者的心理创伤的程度、患者亲属及整个社会的关注程度的影响。

2. Possibility of access to medical care; it is evident that in many remote areas – and there are a quite few of them in India, Africa and Australia-. There are no doctors and people, by and large, are not concerned about their color when there are many more serious diseases to deal with. Let us have a look at some reports from different parts of the world.

2. 获得医疗服务的可能性。很显然，在许多边远地区，印度、非洲和澳大利亚有相当一部分地区没有医生。那里的人总的来说当有更重的疾病要处理时，并不关心他们的皮肤颜色。来看看来自世界不同地区的一些报道。

AFRICA: in Nigeria the rate quoted is 6% for the period of 1980 —1983. Approximately 70% were aged under 30. Again in Nigeria in 1985 —1998, Benin City, only 3.2% out of 351 dermatological cases, were vitiligo.

非洲：尼日利亚在 1980-1983 年所报患病率为 6%。大约有 70%的人发病年龄在 30 岁以下。而在 1985—1998 年尼日利亚贝宁城的 351 例皮肤病患者中只有 3.2%为白癜风。

INDIA: The first comprehensive study was done in Calcutta by Das et al., and they found a prevalence rate of 1:1000 in 15.685 patients. In Saurashtra it was said to be 2 % in 400 skin patients. At the same time another author gives a prevalence of 1.13% in Surat. In Pondicherry the prevalence is quoted as 2.6.%. Shajil says, "The incidence of vitiligo is found to be 0.5-2.5% in India with high prevalence of 8.8% in Gujarat and Rajasthan states".	印度：第一次全面研究在加尔各答由 Das 等人进行，他们在研究 15，685 名患者后发现 1:1000 的患病率。在索拉什特拉，调查 400 名皮肤病患者，其患病率是 2%。同时，另一位学者给出了一个苏拉特地区的患病率：1.13%。朋迪榭里的患病率为 2.6%。Shajil 称，"印度的白癜风的发病率是 0.5—2.5%，但其古吉拉特和拉贾斯坦邦州患病率高达 8.8%。"
BANGLADESH: Khan is right to say that the incidence of vitiligo varies from country to country; the prevalence in his country is 0.4%.	孟加拉国：Khan 说的是正确的，白癜风的患病率因国而异，孟加拉国的患病率 0.4%。
KUWAIT: While analyzing 10,000 patients, Nanda has found that vitiligo is quite low against Atopic Dermatitis.	科威特：在统计 10000 名患者后，Nanda 发现，白癜风较之特应性皮炎其患病率是相当低的。
KOREA. Ahn investigated Korean vitiligo patients and healthy Korean volunteers. Compared to normal controls, patients with lighter skin color had much lower prevalence than the ones with 'darker' skin type.	韩国：Ahn 调查韩国白癜风患者和志愿者。与正常对照组相比，肤色较浅的患者比那些较深的患病率要低得多。
SAUDI ARABIA: One paper quotes a prevalence of 5%.	沙特阿拉伯：其中一篇文献报道其患病为 5%。
EUROPE: A study done in older population in northern Europe revealed that vitiligo had a prevalence of 1.2% against 2.9% of Psoriasis. A few years ago one author said that there were 500.000 cases of vitiligo in the whole UK. In Denmark, out of 47.033 cases examined, the prevalence of vitiligo was 0.38 %.	欧洲：对北欧老年人所做的一项研究显示，白癜风患病率为 1.2%，银屑病的患病率为 2.9%。几年前，一位学者说，整个英国已有 500，000 白癜风病例。在丹麦，研究 47，033 例患者中白癜风的患病率为 0.38%。
# Chapter 4. Age at onset of the disease	# 第 4 章　发病年龄
The age of onset of the disease has also been the subject of many papers. Here again the observation made at the beginning of the chapter is valid. I quote only a few authors.	本病的发病年龄也已经作为多篇论文的研究主题，在这章节的开头再次探讨很有必要，我仅列举几位学者的研究。

Onset at birth has been reported. Handa reports the mean age of 25 years. Cho says that the mean onset age is 5.6 years. Prcic gives the mean age of 7 years. Handa in his study involving 182 elderly patients, found the mean age of 55. Bleheen, in the UK, says that it is present before the age of 20, and this has become a sort of leitmotiv with other authors, who keep on quoting him without saying whether they themselves have done a survey in their country or not.	已有报道白癜风在出生起病。Handa 报道平均年龄是 25 岁。Cho 报道平均发病年龄是 5.6 岁。Prcic 给出 7 岁的平均年龄。Handa 在他的研究了 182 位高龄患者，发现平均年龄为 55 岁。英国的 Bleheen 认为本病在 20 岁前即出现，同时目前这些研究都没有说明研究是否在本国进行。
I have 4 cases of onset at birth, 8 cases of patients aged 80 and one patient aged 97!	我有 4 个病例出生时发病，8 个病例在 80 岁时发病，1 人在 97 岁发病。
From all these papers, which, in many cases, are representative of a small number of patients, we conclude, in a more practical and pragmatic way, by saying that the disease can start at any age; in my series the highest incidence is in the age group of 20-30.	在所有这些论文中，大部分都是样本量较小的研究。我们认为，用更实际和务实的方式说，本病可发生于各年龄段。我的数据显示 20-30 岁发病率最高。
A detailed analysis of my data shows a peak for female-child till the age of 17, after that the male patient's prevalence surpasses the female one. In brief, sex, religion, and socioeconomic status do not seem to have any influence. Occupation, in some patients, is a precipitating factor, as we will see later on.	详细分析我的数据显示 17 岁的女性发病率达到峰值，其后年龄段男性患者超过女性。总之，性别、宗教和社会经济地位似乎没有任何影响。职业对于一些病人是一个诱发因素，我们会在后面看到。
## Chapter 5. Familial incidence	## 第 5 章　家族发病率
The studies of the Italian author Frati are of great interest: he has found a familial incidence.	我对意大利 Frati 的研究产生了极大的兴趣：他已经找到了一个家族性发病的家系。
Alkhabeet writes about family in a non-Mendelian pattern suggestive of multifactorial, polygenic inheritance. Some Indian authors say that it is as high as 13.8%, while others put it at 2.55% (Apte in Mumbai). Such a considerable difference!	Alkhabeet 认为关于家族性发病，其非孟德尔遗传模式提示多因素多基因遗传。一些印度学者认为几率可高达 13.8%，而其他学者认为几率在 2.55%左右（阿普特，孟买）这是一个相当大的区别。

In the 1930s and 1940s it was sustained that vitiligo is not hereditary. More recent authors believe that there is a strong familial relation.	在 20 世纪 30 年代和 20 世纪 40 年代，学者们是坚持认为的白癜风是不会遗传的。而近来学者们更相信白癜风有很强的家族发病倾向。
However, the majority of modern authors have drawn their conclusions basing on a small sample and the one limited to a particular geographical area or community. There is a report in medical literature of vitiligo present in two diovular twins (= false twins). Further, there is a recorded occurrence of a different variety of vitiligo in two uniovular twins (= true twins). There are cases of uniovular twins where only one of the siblings was affected by vitiligo. I have recently came across two uniovular male twins aged 12; only one of them has vitiligo and the other — even 3 years later — does not show any sign of vitiligo; and another example of two female uniovular twins: only one of them has vitiligo for 2 years. Alkhabeet says that there is a certain genetic component, but the concordance of vitiligo in monozygotic twins is only 23%, indicating that a non - genetic component also plays an important role". Neumeister reports on a case of vitiligo that developed in a 50-year - old man 9 months after transplantation from his identical sister who had had this disease for several years. There are authors who believe that childhood vitiligo is mostly associated with family history.	然而，大多数的学者得出他们的结论都基于一个小样本和一个限定于特定的地理区域。在医疗文献中有报道白癜风的出现在 2 对异卵的双胞胎（=假双胞胎），另外，还有一个记录白癜风发生在两对同卵双胞胎（=真双胞胎）。同时也有记录同卵双胞胎仅有 1 人患白癜风。我遇见 1 对 12 岁男性同卵双胞胎，仅 1 人患白癜风，另一人随访 3 年仍无患病迹象。另 1 对女性同卵双胞胎仅 1 人患白癜风 2 年。Alkhabeet 认为白癜风患病存在一定的遗传因素，但白癜风在同卵双胞胎中共同患病率仅为 23%，这表明非遗传成分也起着重要的作用。Neumeister 报道了一个病例，一位 50 岁的男性患者在移居到她妹妹住处 9 个月后发生了白癜风，其妹妹患白癜风数年。有学者认为，儿童白癜风大多与家族发病有关。
My series, which is representative of almost all Indian States, and a few hundred from other parts of the world (Saudi Arabia, Dubai, Muscat, South Africa, Italy, the UK and the USA), shows a low familial incidence, in fact it works out at 2.94%, which is even lower that the prevalence quoted in general population in certain parts of India.	我的数据，几乎代表所有印度各邦，还有几百个来自世界其他国家（沙特阿拉伯、迪拜、马斯喀特、南非、意大利、英国和美国），显示了家族性发病率低，为 2.94%，这甚至比印度某些地区总人口发病率更低。

However, I adhere to the opinion of congenital predisposition, which is not necessarily genetic, or if it is genetic, it has to be a polygenic inheritance, as suggested by Alkhabeet and other authors.	不过，我坚持认为本病有先天倾向，并不一定是遗传；或如果是遗传，就是一种多基因遗传，正如 Alkhabeet 和其他作者所述。
# Chapter 6. Precipitating factors	# 第 6 章　诱发因素
A large number of patients claim that the disease appeared — or spread — from one tiny patch to a wide pattern, after severe physical and / or mental stress. These are called 'precipitating factors', because they are not the cause of the disease, but induce its development. Stress, in this case, cannot be considered to be the 'cause' of the disease, but rather a contributory factor or a 'precipitating factor'.	很多患者抱怨这种疾病出现时为一个小斑片而后播散到全身广泛受累，随之而来的是心理的巨大压力。这些被称作是疾病的“诱发因素”，他们并不是疾病的病因，但却可以促进疾病的发展。在这种情况下，压力并不是疾病的病因，而是一个促成因素或是诱发因素。
The list of precipitating factors is long and can be divided into four sections, such as:	白癜风诱发因素很多，可以分为四个部分，如下：
1) Physiological	1）生理因素
a) Menarche or first occurrence of menses. This could justify high incidence in young girls.	a）月经初潮。这可以解释年轻女孩的发病率高。
b) Pregnancy, delivery and menopause. In all these cases the female body undergoes stress, and, moreover , there are certain hormonal changes. Oestrogens are known to increase skin color; decreased level of these hormones — as it occurs during menopause — could explain the increased rate of vitiligo patches in menopausal ladies.	b）妊娠、分娩和更年期。在所有这些情况下，女性的身体经历了紧张焦虑，而此外，也有一定的激素的变化。众所周知，雌激素是可以加深皮肤的颜色；在更年期该激素水平下降可以解释处于更年期的女士们白癜风斑片的进展速度加快。
2) Pathological	2）病理因素
a) Parasities, like Helmints , Amoeba and Giardia Lamblia. It is rather evident that intestinal parasites upset normal functioning of the digestive system.	a）寄生虫。像蠕虫，阿米巴原虫孢子虫和蓝氏贾第鞭毛虫。很明显肠道寄生虫破坏正常运作的消化系统。

b) Bacteria and fungi. Many young girls with vagina vitiligo have a history of a fungal infection called candidiasis. The same is true in case of penis glans vitiligo . Vitiligo is known to be a consequence of Tinea Versicolor (another fungal infection), which does interfere with melanogenesis.	b）细菌和真菌。许多年轻女性患有阴道白癜风既往都有念珠菌病史。阴茎白癜风也是这样。有人认为白癜风是通过花斑癣（另一种真菌）感染，干扰黑色素的生成。
c) Viral disease. I do have a number of cases where vitiligo developed in patients previously affected by Herpes Zoster. There are a few patients who have developed a white patch on their lips after Herpes labialis.	c）病毒性疾病。我有许多病例白癜风发生于带状疱疹曾发生的地方。有几个患者在出现唇部疱疹后出现口唇白斑。
d) Typhoid fever, malaria, jaundice. These diseases are stressful to such an extent that it is not surprising to have other diseases arising as consequences of these major body alterations.	d）伤寒、疟疾、黄疸等。这些疾病带来很大程度的压力，而这些重大的身体改变引起其他疾病并不奇怪。
e) Chronic gastritis and low level of gastric acid have been found in some patients. Here we also can see impaired absorption of important and vital elements.	e）慢性胃炎和低胃酸水平已在一些病人中被发现。在这里，我们同样可以看到吸收障碍是很重要和关键的因素
f) Hepatitis. The relation is not clear, though there are authors who believe that the evidence is compelling. A few years ago I met a general practitioner who achieved good results in vitiligo control (if not cure) by using Essentiale, a liver-protector.	f）肝炎。目前关系并不明确，虽然有学者认为目前的证据是令人信服的。几年前，我遇到了一个全科医生通过使用肝得健，一种保肝药，在白癜风控制（如果不能治愈）上取得了良好的效果。
g) Thyropathies. This, in theory, can make vitiligo worse, as it has been explained earlier.	g）甲状腺疾病。这类病理论上可以使白癜风变得更重，正如先前提到的。
3) Psychological factors	3）心理因素
Death of one’s dearest, loss of job and/or family unhappiness are all stressful, often to the extreme. In this case Interleukins are involved and some clarifications will be given later.	配偶死亡、失业和/或家庭不和的这些压力往往能达到极致。在这种情况下，白细胞介素会参与其中，稍后将给出详细解释。

The role of stress has been highlighted by various authors, however there is no consensus yet. Some of them say that stress may alter the immune system and, hence, plays an important role in precipitating autoimmune diseases in patients predisposed to them. Fisher reports on a case of vitiligo as a consequence of persecution.	尽管许多学者都已强调过压力的作用，但还没达到共识。其中一些学者认为，在易感人群中，压力可能通过改变免疫系统，从而在诱发自身免疫性疾病方面起重要作用。Fisher 曾经报告过一例由烦恼引起的白癜风病例。
Several authors have reported on poor quality of life in vitiligo patients. It is self-evident that vitiligo, or any other disfiguring disease, would have a certain impact on the patient's life. This is more so in dark-skinned individuals, where any vitiligo patch shines like a star; in India there is one more problem: common people confuse vitiligo with leprosy and this adds a certain amount of scare, because leprosy is a 'curse from God'. I have seen young girls forced to divorce because of this disease, and I have seen young men contemplating suicide because they could not find a life-partner.	一些学者报道过白癜风患者生活质量差。不言而喻，白癜风或其他损容性疾病会对患者的生活产生一定影响。在深色皮肤的个体中，此现象更为明显，任何一个白斑像星星闪耀般明显；印度有另外一个问题：因为麻风病是一种“来自上帝的诅咒”，老百姓易混淆白癜风与麻风病，这增加了一定恐慌。我看到一些年轻女孩们因为白癜风被迫离婚，也看到一些年轻男子因为找不到伴侣而产生自杀念头。
4) Chemically-induced Vitiligo	4）化学诱导的白癜风
A number of chemicals can be blamed for causing and/or precipitating a Vitiligo patch in a patient who has a disposition to the disease. Vitiligo due to para-tertiary butylphenol was reported in 1971 from St Johns Hospital of Dermatology in London and soon after that in Germany by Rodermund who reported vitiligo associated with hepato- and splenomegaly and goitre in three patients working in a factory producing para-tertiary butylphenol. From then on, a number of authors have found a causal relation between a form of chemical vitiligo, indistinguishable from vitiligo vulgaris, and para-tertiary butylphenol.	对于有白癜风倾向的患者，许多化学品能够引起和/或加重有白癜风发病风险的病人的白斑。1971 年伦敦圣约翰医院的皮肤科曾报道过因对-叔丁基苯酚引起的白癜风，不久之后，德国的 Rodermund 报道了三名在生产对-叔丁基苯酚的工厂工作的伴有肝脾肿大和甲状腺肿的白癜风患者。从那时起，许多学者发现某种化学性白癜风（区别于寻常型白癜风）与对-叔丁基苯酚之间有因果关系。
Various dyes have been reported to cause vitiligo, such as:	已报道了许多能够引起白癜风的染料，如：

1.Azo dye in Alta; Alta is a scarlet-red solution used by Indian women as a cosmetic colorant for their feet.	1.Alta 中的偶氮染料；Alta 是一种猩红色溶液，印度妇女涂在脚上的化妆着色剂。
2.Hair dye.	2.染发剂。
3.Rubber, in various industries, tyre assemblers, in particular, as they often deal with a rubber antioxidant. Rubber footwear has been also blamed for chemical vitiligo. In these cases chemicals have been identified as typical allergenic accelerators in children's rubber shoes, ladies' rubber boots and ladies' canvas shoes. Rubber and plastic chappals are a well-known cause of vitiligo in India.	3.橡胶，许多工业中，尤其是轮胎安装师，因为他们经常用到橡胶抗氧化剂。橡胶鞋也与化学性白癜风有关。在这些病例中，化学品被认为是儿童胶鞋，女式橡胶靴和帆布鞋中的典型增敏剂。在印度，橡胶和塑料凉鞋是白癜风众所周知的原因。
Therefore, a possibility of penis vitiligo development can be, in part, due to rubber condoms, at least in patients who are predisposed to vitiligo. The same can be said about contact with plastic purses and plastic glass-frames.	因此，至少在白癜风易感患者中，部分阴茎白癜风的发生可能是由橡胶避孕套造成的。同样，这同样适用于接触塑料皮包和塑料的眼镜框引发的白癜风。
4. Cinnamic aldehyde in toothpaste and the adhesive used to stick Bindi. Epoxy resin in dental acrylic materials. Nickel gives rise to contact dermatitis manifested as vitiligo.	4.牙膏和宾迪粘合剂中的肉桂醛。在牙科丙烯酸树脂材料的环氧树脂。镍导致表现为白癜风的接触性皮炎。
5. A large number of drugs have been associated with vitiligo:	5.大量药物与白癜风有关：
a) Chloroquine.	a）氯喹；
b) Hydroquinone, present inphotographic developer, and monobenzone.	b）存在于促显影剂的氢醌和单苯腙；
c) Alpha-Interferon, used in treatment of active hepatitis C.	c）用于治疗活动性丙型肝炎的 α-干扰素；
d) Even corticosteroids have been blamed and it is common experience – I have 19 such cases of chemical vitiligo developed after extensive and long-term use of Betnovate cream.	d）甚至是皮质类固醇，这是普遍经验- 我诊断过 19 例大量长期使用新肤美颜霜后发生化学性白癜风的病例；
e) Levodopa used in treatment of Parkinson’s disease.	e）治疗帕金森氏病的左旋多巴；

f) Beta blocking drugs (such as Atenolol) may exacerbate vitiligo	f）β 受体阻滞剂（如阿替洛尔），可能会加剧白癜风；
h) Proton Pump inhibitors, such as Lansopran, used to treat gastric problems.	h）用于治疗胃病的质子泵抑制剂，如 Lansopran。
Chlorine-induced Vitiligo is not a rarity. Chlorine is found in excess in swimming pools which are not scientifically purified and maintained; I have three young girls and two boys — without family history of vitiligo — who clearly ascribe the development of vitiligo to the swimming pool used on daily basis for 2-3 months. A patient of mine attributed his vitiligo of lips to Alum, used to clean teeth!	氯引起的白癜风并不罕见。游泳池中的过量氯，是不合科学地净化和维护；我诊断过无白癜风家族史的患白癜风的三个年轻女孩和两个男孩，他们明确地认为病因是 2—3 个月每天都在游泳池里。我的一个患者把唇部白癜风归因于清洁牙齿的明矾！
Alum was used as a base in skin whiteners during the late 16th century.	明矾在 16 世纪后期是用来皮肤美白的基础用品。
Ghosh et.al. have recently done an interesting and detailed study of some of the chemicals known to cause leukoderma, and individuals at risk. They list among others: hair dyes, deodorants / perfumes, adhesives (bindi), rubber sandals, black socks / shoes, eyeliners, lipliners, rubber condoms, lipsticks, cuddly toys, toothpaste, and insecticides.	Ghosh 等人最近做了一个关于一些已知的能够导致白斑的化学品和高危人群的有趣而详细的研究。他们列出的包括：染发剂、除臭剂/香水、粘合剂（宾迪）、橡胶凉鞋、黑色袜子/鞋、眼线笔、唇线笔、橡胶避孕套、唇膏、近身玩具、牙膏和杀虫剂。
Most common and generally used items include:	最常见与最普遍使用的项目包括：
Rubber gloves 12%	橡胶手套 12%
Lubricants and motor oils 6.8%	润滑油和发动机油 6.8%
Detergents 5.3%	洗涤剂 5.3%
Printing ink 3.6%	印刷油墨 3.6%
Chemical laboratory agents 1.5%	化学实验室试剂 1.5%

Every dermatologist in India has come across a vitiligo patch localized on the left breast in some women: often ladies hide their money-purses in the brassiere. Vitiligo due to Bindi (the beauty spot Indian ladies like to wear in the middle of the forehead) is common experience, and when patients are told to avoid it, not all of them agree because of pressure from relatives and in-laws: married young girls in Maharashtra have to wear a Bindi.

在印度每个皮肤科医生会经常遇到一些左侧乳房一块白癜风白斑的妇女：她们经常把自己的钱包藏在胸罩里。宾迪（印度女士们喜欢戴在额头中间的美人痣）可引起白癜风是普遍经验，当告诉患者避开它时，由于来自亲戚的压力以及马哈拉施特拉邦的法律规定结婚的年轻女孩都必须戴宾迪，并非所有患者都同意这一做法。

Patients often ask: “When do I stop getting white patches?” Well, it is difficult to predict the course of this disease; in a good number of patients – as I have noted – the disease goes on for 3-4 years and then it settles down, with one or two stubborn patches and the clearance of the others, but there are patients in whom the disease has certain periods of stability and then suddenly starts increasing. And there are patients – very few indeed — who gradually and inevitably turn completely white, some of them porcelain-white, others - white similar to Caucasian skin color. The natural course of vitiligo is unpredictable.

患者经常会问：“我什么时候会停止长白斑？”预测这种疾病病程是很难的；正如我所指出的那样，相当数量的患者在疾病发展3-4 年后稳定下来，除一两个顽固白斑外其他都消退；但也有一些患者经历一段稳定期后，突然开始增加；少数患者逐渐并不可避免地变成全白的，其中一些为瓷白色，而其他的变得与白种人肤色相近。白癜风的自然病程是无法预测的。

Chapter 7. Treatment and management. Introduction

第 7 章　治疗与管理.简介

Treating vitiligo is not always easy and sometimes it is an ‘art’. It is very exacting to the attending doctor, the patient and his/her family. Both, the patient and the doctor have to appreciate the difficulty, as this disease is a complex one, so is its treatment, moreover, though it looks like one disease, in reality there are various forms of the same disease and they need to be treated differently. It is not only a question of tablets and creams, moral and psychological support are also needed, as well as the will and confidence, on the part of the patient, that cure is possible.

治疗白癜风并不总是容易的，有时它是一种“艺术”。这对于主治医生，患者和他/她的家庭来说，都是非常严格的。而且，患者和医生必须正视其难度，因为疾病本身及其治疗都是复杂的，而且，虽然它看似是一个疾病，事实上有各种形式，需要区别对待。它不仅是药片和药膏的问题，也需要道德和心理支持以及意志和信心，就部分患者而言，治愈也是可能的。

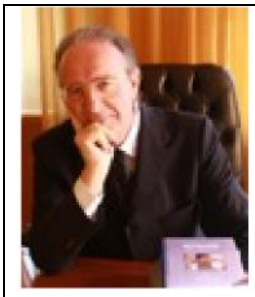
Nothing boosts the moral of the patient like some fast changes. If the patient does not see any noticeable changes after 2-3 months of therapy, he/she is bound to get discouraged and discontinue the therapy.	快速好转能提升患者的精神。如果患者 2—3 个月的治疗后，并没有看到任何明显的变化，他/她一定会气馁并停止治疗。
As there are various forms of the disease, treatment cannot be uniformly the same; human face and hands cannot be treated with the same creams, as we will see later on.	该病有各种形式，治疗当然也不能完全相同；面部和手部不能用相同药膏治疗，在后面我们会讲到。
Vitiligo requires much motivation in the patient because treatment is sometimes long and demanding; sun exposure is not always possible, in women in particular, and, hence, the major component of the treatment is missing. Dietary restrictions are not always possible, especially for those who live in a hostel or a boarding school.	因为治疗有时是漫长而苛刻的，白癜风患者需要强大的动力；尤其对于妇女来说，不可能总可获得光照，因而缺少了治疗当中的主要环节。特别是对于那些住在宿舍或寄宿制学校的人来说，饮食限制并非总是可行。
# Chapter 8. Treatment and management	# 第 8 章　治疗与管理
First of all, let us have a critical look at various types of treatment and after that I will express my opinion and make some suggestions.	首先，让我们仔细地看看不同类型的治疗，在此之后我会表达我的意见，并提出一些建议。
1. Steroids. Either locally or orally have been suggested. Steroids alone are not curative, they are used only for one purpose: to stop the inflammation, which is often present in vitiligo, and suppress antibodies (if present), but taken alone they do not cure the disease. However, steroids along with my treatment have given good results as I will describe later on. Steroids applied as creams/lotions do give good results, but cannot be used for too long because of their side effects like thinning of the skin, stretch marks, etc.	1. 类固醇。建议局部或口服给药。仅有类固醇是不能治愈的，用它们只为了：阻止常存在于白癜风的炎症并抑制抗体（如果存在的话），但只靠它们并不能治愈疾病。然而，类固醇联合其它治疗取得了很好的效果，像我稍后介绍的一样。作为面霜/乳液应用的类固醇确实取得了好效果，但不能长期使用，若使用时间过长，会产生副作用如皮肤变薄、紫纹等。

2. PUVA. PUVA stands for Psoralen + Ultraviolet light A, while PUVASOL means Psoralen+Sunlight. Psoralens have been used, in India, by el-Mofty the Ayurveda doctors from times immemorial. During the late 1950s American dermatologists, started using Psoralens and soon they realized that the beneficial effects of Psoralens were enhanced by exposing the patient to sunlight for 15-20 minutes after the intake of a psoralen tablet. PUVA does have some common side effects and some rare ones. Common side effects include liver damage and cataract.	2. PUVA。 PUVA 代表补骨脂素+UVA，而 PUVASOL 意味着补骨脂素+光照。在印度，从远古时代 el-Mofty 医生就开始使用补骨脂素了。在 20 世纪 50 年代后期，美国皮肤科医生开始使用补骨脂素，很快他们意识到，服用补骨脂素药片后光照 15-20 分钟可增强补骨脂素的有利作用。PUVA 确实有一些常见及罕见的副作用。常见的副作用包括肝功能损害及白内障。
TREATMENT	治疗
After trying, for years, Psoralens and other modalities — with disappointing results – I went insearch of other forms of treatment. In 1983 I came across the studies of Frati, who proposed the theory of 'metabolic disorder' and showed the importance of Vitamin B6 in Vitiligo. At the same time I made aware that in a leprosy-hospital in Andhra Pradesh, Dapsone was being used for leprosy treatment.The importance of Copper — as a component of Tyrosinase enzyme — and Iron have been highlighted by many authors. A research worker, Prota, has written extensively on the role of Peroxidase. Putting together all this information and ideas I worked out a protocol, which is included into my book, and is available now from me, but soon can be also purchased through the Internet.	经过多年的努力，在补骨脂素和其他方式得到令人失望的结果后，我搜寻了其他治疗方法。1983 年，我无意中看到了 Frati 的研究，他提出了白癜风“代谢紊乱”理论，并提出了维生素 B6 的重要性。同时我知道了在安得拉邦的一个麻风病医院，用氨苯砜治疗麻风病。许多学者强调作为酪氨酸酶的组成成分的铜及铁的重要性。一个研究工作者，Prota 曾撰写过大量关于过氧化物酶的作用。综合以上所有信息和想法，我拟定了一份草案，收录在我的书里，可从我这得到，但很快也可以通过互联网购买。

SUGGESTION FOR TREATING VARIOUS AREAS OF THE BODY	人体各部位治疗的建议
Face: Hydrocortisone butirate 0.1% should be applied in the morning followed by an exposure to sunlight and also at bed time. It is works well, both in children and adults. If this does not work, you can try TACROLIMUS 0.1% (not 0.03%) in the morning plus sunlight and again at bed time.	面部：无论是在随后暴露在阳光下的早晨还是在睡觉的时候，都应使用 0.1%丁酸氢化可的松。无论是在儿童和成人，效果都不错。如果效果不好，可尝试早晨使用 0.1%他克莫司加光照（而不是 0.03%），晚上再用一次。
Neck: I advise the same as above.	颈部：建议同上。
Body: Daivonex and UVB should give good results. You can also try Tacrolimus with NBUVB.	躯干：达力士与 UVB 应取得良好的效果。也可试用他克莫司与窄波 UVB。
Arms: Clobetasol along with Salicylic acid 4% can give good results, but should not be used for more than 2-3 months. Results are better with NBUVB along with Clobetasol.	上肢：氯倍米松与 4%的水杨酸可以提供良好的结果，但使用不应超过 2—3 个月。窄波 UVB 合用氯倍米松效果更好。
Fingers and toes are difficult to treat, but I am still working on it and I hope to give you a different modality of treatment soon: in about 3-4 months I will be able to offer you an effective treatment for these difficult areas. Surgery is the last resort.	手指和脚趾是很难治疗的，但我仍然在努力，并且希望不久后能给你一个不同的治疗方式：大约 3—4 个月后，我将能够针对这些难治部位，提供一个有效的治疗方法。手术是最后的方法。
I prefer free skin grafting, which gives good/acceptable results. Punch graft has proved to be good, if the area is small, but it is not good for big patches and at any rate the results depend a lot on the experience and technique capability of the surgeon.	我更喜欢游离植皮，这可取得好的/可以接受的效果。如果面积小，打孔移植已证实是很好的，但它不适合大斑片，至少很大程度上效果取决于手术医生的经验和技术能力。
Melanocytes transfer – whether cultured or non cultured melanocytes – is a good choice, but it does not come cheap, a laboratory is required, as well as specialized personnel.	黑素细胞转移-无论是培养或未培养的黑素细胞-是一个很好的选择，但它不便宜，实验室以及专业人员是其必备条件。

Concluding remarks	结束语
The pathogenesis of vitiligo is still a puzzle awaiting a solution.	白癜风的发病机制仍然是一个待解决的谜。
Recent research has demonstrated lacunae in each of the hypotheses so far proposed. Therefore, a unifying theory that takes into account older hypotheses and contemporary findings about the role of T-cell, cytokines, Langerhans cells and various other factors, is needed. Segmental vitiligo most likely represents a localized form; chemical vitiligo is an entity in itself, so is the Palmo-plantar vitiligo, so often noticed in India.	最近的研究表明，目前为止提出过的任意一个假说都有缺陷。因此，形成一个兼顾较早的假说和现代发现的统一理论是非常必要的，这些因素包括 T 细胞、细胞因子、朗格汉斯细胞及白癜风的其他因素。节段型白癜风最可能代表一个局部的形式；在印度经常能注意到的化学性白癜风和掌跖白癜风本身都是一种形式。
Treatment should be aimed at correcting the disorder more than ‘tanning the skin’ For many years, 24 or so, I have tried a great number of therapies and finally have made my choices and followed my protocol; but I am still open to new suggestions. With my protocol the results are excellent in about 80 % of patients, provided that they follow all of the instructions, including sun exposure.	治疗应更以纠正紊乱为目的而不是“晒黑皮肤”。经历 24 年左右，我已经尝试了多种治疗，最终做出选择并且拟定了草案；但我仍然接受新的建议。用我的草案，并且遵守所有指示，包括光照，约 80%的患者效果是极好的。
There are some failures, like in any branch of medicine. There are patients who do not seem to respond to any therapy and this is a drawback that stimulates us to continue our study and try new avenues. It is a fact that even though the disease appears to be one and the same, there are certain varieties, like segmental and palmo-plantar ones, that require a different treatment.	同任何一个医学分支一样，存在一些失败的教训。有些患者似乎对任何治疗都没有反应，这一缺点激励我们继续研究并尝试新的途径。即使这种疾病看来似乎是完全一回事，事实上是有一定分类的，如需要不同治疗方法的节段型和掌跖型。
The patient’s co-operation and his/her will to cure is extremely important. I can say that today there are thousands of patients who have taken my treatment faithfully and are totally cured. So, there is a hope, there is a treatment; both patients and doctors must be willing to follow the instructions religiously and ‘be patient’...there are no miracle cures.	患者的合作和他/她治愈的意愿非常重要。可以说，如今有成千上万的如实遵从我的治疗的患者完全治愈了。所以，有希望才有治疗；患者和医生必须愿意虔诚地听从指示并有耐心.....没有灵丹妙药。

Surgery, related to vitiligo, is an interesting development and many dermatosurgeons are trying to improve on old procedures, while exploring new paths. Today, dermatosurgeons have a wide choice of procedures, but training, experience and appropriate equipment (for some procedures) are required to achieve good results. However, when all is said and done, surgery is not the first choice, and this should be clear to the doctor and explained to the patient. I have seen, over the years that medical treatment — in those patients who respond to it — gives the best results in color matching, which surgery can hardly ever achieve. That is why, when patients come to me requesting a surgical intervention, I insist on trying a medical approach first. If, after 6 months or so, the medical treatment does not give any significant results, then and only then do I suggest a surgery.	白癜风相关的外科，是一个有趣的发展并且皮肤外科医生正努力改善旧程序，同时探索新的路径。今天，皮肤外科医生有多种治疗方法供选择，但需要培训，经验和适当的设备（用于某些治疗），以达到良好的效果。然而，即使一切准备就绪，医生也应该明确并向患者解释手术不是首选治疗。这些年来，我看到药物治疗-在有效的患者身上-在颜色方面取得了最好的结果，而手术几乎不可能达到此效果。这就是为什么当患者要求手术干预时，我坚持先尝试药物治疗的原因。如果 6 个月左右的药物治疗仍未取得任何明显效果，直到那时我才建议手术。



About Prof. Torello Lotti, MD

Prof.Lotti is Full Professor and Chairman of the Dermatology and Venereology Division at the University of Florence School of Medicine, Florence, Italy.

He graduated in Medicine and Surgery cum laude in 1978 from the University of Florence School of Medicine, Florence, Italy. He completed residencies in Dermatology and Venereology (cum laude) in 1981 at the same School. He postgraduated in 1983-84 as Resident Medical Doctor at the Dermatology Institute, London, UK. He is currently Full Professor of Dermatology, Dept. of Critical Medical Surgical Area, University of Florence, Italy, and Chair, Resident Program in Dermatology, University of Florence, Italy

The fields of his principal scientific investigations are Neuropeptides, Vitiligo, Vasculitis, Psoriasis, Cosmetic Dermatology, Dermatologic Fisiotherapy.

He is visiting at: Thomas Jefferson University, Philadelphia (PA, USA), Charles University (Prague, Czech Republic), Bowman Gray University (NC, USA), University of Louisville (KY, USA), Medical University of South Carolina (SC, USA).

His past activities in serving Dermatology have been numerous, among which are: Past-President of the Italian Society of Dermatology and Venereology (SIDeMaST , 2009-2010) and the Past President of the International Society of Dermatology (ISD, 2009-2010)

关于 Torello Lotti 教授, MD

Lotti 教授是意大利佛罗伦萨的佛罗伦萨大学医学院皮肤性病科教授兼系主任。

1978 年，他以内外科优等成绩毕业于意大利佛罗伦萨的佛罗伦萨大学医学院。1981 年，他在同一所学校完成了皮肤病与性病（优等）住院医师实习。1983-84 年度，他在英国伦敦皮肤病研究所作为住院医师取得了硕士学位。目前，他是意大利佛罗伦萨大学 Critical Medical Surgical area 部门皮肤科正教授，意大利佛罗伦萨大学皮肤科 Resident Program 的主席。

他主要研究的领域是神经肽、血管炎、白癜风、银屑病、美容皮肤科、皮肤 Fisiotherapy。

他是如下大学的访问教授：费城托马斯杰斐逊大学（费城，美国），查尔斯大学（布拉格，捷克共和国），鲍曼灰大学（北卡罗来纳，美国），路易斯维尔大学（肯塔基州，美国），南卡罗来纳大学（南卡罗来纳，美国）。

他过去任职皮肤科的职务数不胜数，其中有：意大利皮肤性病学会的前任会长（SIDeMaST，2009-2010），国际皮肤科学会的前任会长（ISD2009-2010 年）

President of the European Society for Cosmetic and Aesthetic Dermatology (2003-2004)	欧洲美容皮肤病学主席（2003-2004）
Editor in Chief of the Journal of the European Academy of Dermatology and Venereology (1992-2002)	欧洲科学院皮肤性病学杂志主编（1992-2002 年）
President of the 13th Congress of the European Academy of Dermatology and Venereology (2004)	第 13 届欧洲皮肤病与性病病医学会主席（2004 年）
Chairman Congress Forum of the American Academy of Dermatology (1999-2006)	美国皮肤医学会论坛主席（1999-2006）
Editor in Chief, “Psoriasis”, 2006-	“银屑病”杂志主编，2006 年-
Chief Editor of the Giornale Italiano di Dermatologia e Venereologia (2010-2020)	意大利皮肤性病杂志总编辑(2010-2020 年）
Section Editor “Dermatologic Therapy”, 2007-	“皮肤病治疗”专栏编辑，2007 年-
Regarding scientific publications, he has authored 1054 papers (393 peer reviewed articles, 288 books chapters, 363 abstracts).	他撰写了 1054 篇论文（393 同行评议的文章，书籍章节 288，摘要 363 篇）
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About Prof. Antonio Salafia, MD

Prof. Antonio Salafia graduated from St. Johns' Medical College in Bangalore and soon after went to Mumbai to work on a honorary basis, at a NGO dedicated to leprosy patients. In Bombay he studied Dermatology for 4 years under Prof. Rui J. Fernandez, and Plastic Surgery under Dr. J. Shah. In 1983 went to the Istituto Dermatopatico dell'Immacolata, in Rome, for a stage in advanced Dermatology. There he got in touch with Dr. C. Frati who passed onto him his experience with Vitiligo. In 1981 the Vimala Dermatological Centre (VDC) started reconstructive surgery for leprosy patients; Prof. Salafia joined as assistant to Dr. J. Shah. Again in 1984 he went Italy to study Hand-surgery under Prof. E. Morelli, and microsurgery with Prof. G. Brunelli. On his return he continued his work as assistant surgeon at VDC. As Dr. Shah retired from VDC, Prof. Salafia took over as reconstructive surgeon, while carrying on his duties as dermatologist. The VDC is first and foremost a referral centre for leprosy patients.

关于 Antonio•Salafia 教授，MD

Antonio Salafia 教授在班加罗尔的圣约翰医学院毕业后不久就来到孟买的一个致力于麻风患者的非政府组织的荣誉性工作。在孟买，在皮肤科 Rui J. Fernandez 教授手下学习 4 年皮肤科，和 Dr. J. Shah 手下学习整形外科。1983 年，为了学习更先进的皮肤知识，来到罗马的 Istituto Dermatopatico dell'Immacolata，在那里，他接触到了 C. Frati 博士，博士传授了关于白癜风的经验。1981 年，在 Vimala 皮肤病治疗中心（VDC）开始为麻风病患者做重建手术；Salafia 教授成为了 Dr. J. Shah 的助手。1984 年，他去了意大利，跟着 E. Morelli，教授学习手外科，跟着 G. Brunelli 教授学习显微外科。他回国后，继续他在 VDC 的助手工作。Dr. J. Shah 从 VDC 退休后，Salafia 教授接手重建外科手术，履行皮肤科医生的义务。 VDC 是第一个也是最重要的麻风病患者咨询中心。

Over the years the VDC has become well-known in and around Mumbai for its Skin-OPD and it was here that Prof. Salafia started experimenting with new creams and lotions for Vitiligo; gradually the protocol – based on Dapsone, Vitamin B6 and Folic Acid was refined and now – for many years since - this has the standard treatment for Vitiligo at VDC.	经过多年，VDC 因其皮肤门诊已在孟买和附近地区闻名。在这里，Salafia 教授开始尝试新的治疗白癜风的面霜和乳液； 逐渐拟定了基于氨苯砜、维生素 B6 和叶酸的草案，到目前为止这在 VDC 是白癜风的标准治疗方法。
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25 June	25 June
Over 100 million of people suffer from this skin disease daily, but there is no cure in sight. With focus on collaboration efforts, we can bring that number closer to zero.	过亿的人患有这种皮肤疾病，但目前还没有治愈在望。聚焦于合作努力，我们可以把这个数字接近于零。
Take action today and urge the UN Secretary —General to prioritize multilateral efforts in healthcare and education for this neglected disease.	立即采取行动，并敦促联合国秘书长-为这一被忽视的疾病的医疗保健和教育，优先做出多方面的努力。
Please go to 25June.org and sign the petition	登陆 25June.org　并签署志愿书
Sponsored by VR Foundation, supported by World Health Academy	由 VRF 赞助,　世界卫生学院支持

(问 题)

1. How vitiligo were classfied in clinics? Chinese version and others	1. 国内外对白癜风是如何进行临床分类的 ？
2. Mucusal vitiligo, a single form or a part of acrafacial vitiligo?	2. 粘膜白癜风是独立的临床类型还是肢端白癜风的一部分？
3. The role of oxidative stress and antioxidants in vitiligo.	3. 氧化应激在白癜风发病中的作用，抗氧化剂治疗的作用？
4. Is vitamin C restrained from intake?	4. 白癜风患者避免服用维生素 C 吗？
5. What antioxidants has been documented in the successful treatment of vitilifo?	5. 哪些抗氧化剂有报道被用来成功治疗白癜风？
6. Premature hair greying? Any relationships with vitiligo?	6. 何为早白发？与白癜风有何联系？
7. Acral vitiligo treatment, why difficult and how to improve the efficacy?	7. 肢端白癜风治疗，为何如此困难？
8. How vitiligo affects a patient's quanlity of life in Chinese? In the case of young patients, how the conditions affect their parents?	8. 白癜风如何影响患者的生活质量？对少儿患者而言，他们的疾病如何影响家人？
9. How traditional Chinese medicine evaluate and treat vitiligo?	9. 中医药如何理解并治疗白癜风？
10. vitiligo and other co-morbidities, what should be in mind when diagnosing a vitiligo patient?	10. 白癜风与其他并发疾病，诊断白癜风应当考虑的其他身体状况