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# A Study on the Receptivity to Cancer Prevention Among African American Muslims

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## Abstract

The purpose of this study was to develop a policy analysis and brief to support the development of a National Institutes of Health funding application for a project that would be the first to examine the attitudes and behaviors of adult ( $\leq$40 years of age) male and female African American (AA), Afro-Caribbean (AC), and first and second generation immigrant West/West Central African (W/WCA) Muslims, regarding cancer prevention. The objective of the proposed research was to identify culturally and religiously-tailored interventions that would most likely promote the use of cancer screening among these populations. Using an interdisciplinary social science approach, we were able to present for the first time to our knowledge, data that allows for policy inference concerning the effects of Islamic religious affiliation on cancer-prevention attitudes and practices in African descended men at who are at risk for prostate cancer. This study addressed the high rates of cancer-related morbidity and mortality, especially breast and prostate cancer, among peoples of African descent and Muslim faith in the Washington DC Metropolitan area. There is currently no existing scientific research on the influence of ethnicity and religion among AA, AC, W/WCA communities and willingness to participate in cancer prevention programs, including their acceptance of clinical screening. This study involved conducting structured interviews with members of these ethnic and religious groups. The findings indicated that despite any cultural differences between AA, AC and W/WCA Muslims, the idea of upholding and following Islamic beliefs were commonly of higher priority for participants. The results from these interviews suggest that overall, participants will benefit the most from general health education as well as education on cancer prevention. Moreover, 100% of the subjects agreed to participate in cancer screening if it was necessary or recommended by a trustworthy, qualified and preferably Muslim healthcare provider. Implications for the proposed NIH funded research included culturally and religiously competent care preferably by a Muslim doctor, in addition to health education and population-based screening having the greatest potential to produce sustainable anti-cancer behaviors.

**Keywords:** Islam, Muslim, culturally and religiously competent care, health education

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## Introduction

The Islamic tradition began on the Arabian Peninsula with the birth of Muhammad, the Prophet (570?-632 A.D.). Traditional Islam teaches that there is only one God (Allah), who works through prophets rather than assuming a physical form. After the death of Muhammad, Islam faced a schism and divided into Sunnis and Shiites. The Shiites believe that Islam should be led by descendants of Muhammad, while Sunnis believe that the leader of Islam should be appointed by election and consensus. Sunnis make up 84 to 90 percent of the world's Muslims. The word *Sunni* refers to the words and actions of Muhammad. The Sunnis try to follow Muhammad's example of how to live as a Muslim**[1].**

Founded in 1930, the Nation of Islam was founded on the basis of peace and as an answer to a prayer of Abraham to deliver his people who would be found in servitude slavery in the Western Hemisphere in this day and time. Under the leadership and tutelage of Elijah Muhammad, the organization reached international prominence. As traditional Islam does, the Nation of Islam teaches cleanliness inwardly and outwardly with the practice of good manners and respect to one and all; trained to eat and prepare the best of foods for the longevity of life, without the use of alcohol, smoking and substance abuse which endangers the ethics of healthy living; and trained to be an exemplary community expressing the highest spiritual goals for the reform of ourselves and others based on wisdom, knowledge and beauty**[2].**

## Background

Cancer health inequities (disparities) and use of regular cancer prevention strategies, including clinical screening

Evidence of Cancer Health Disparities among African Americans, Afro-Caribbeans, and West/West Central Africans:

A total of 1,638,910 new cancer cases and 577,190 deaths from cancer are projected to have occurred in the United States in 2012**[3].** The National Cancer Institute estimates that approximately 942,400 African Americans (AAs) with a history of cancer were alive in January 2007**[4].** Cancer is expected to have killed 64,045 AA adults in 2011; making it the second most common cause of death in this group**[5].**

AAs have lower survival after diagnosis with most types of cancer**[6].** For example, AA women are less likely to receive adjuvant chemotherapy and radiotherapy following breast cancer surgery, compared to European American women**[7].** Breast cancer survival is, over all, three years shorter following diagnosis for AA women compared with EA women, mostly because the cancer in AA women is often more advanced when they first seek medical care**[8]**. Progress has been made in decreasing disparities in survival in breast cancer and prostate cancer for AAs and European Americans (EAs)**[6,3].** Yet, AAs continue to bear the brunt of the burden of mortality due to breast and prostate cancer and about 168,900 new cancer cases are expected to have been diagnosed among AAs in 2011.

Information on breast cancer levels in Afro-Caribbeans (AC) is limited. However, a 2008 report from Britain suggested that AC women residing in the UK may have certain protective breast cancer risk factors, including later menarche, shorter stature, higher parity, earlier age at first birth, and less use of hormone therapy compared to European British women**[8].**

Published information on cancer epidemiology among immigrant and non-immigrant W/WCAs is extremely limited. The overriding perspective (in comparisons with AAs) is that immigrant W/WCAs may carry a higher burden of high-risk alleles of African origin for certain diseases than the more admixed AAs yet W/WCAs may also benefit from a higher prevalence of protective alleles of African origin for certain other conditions**[9].**

A high frequency of aggressive, early onset, and highly fatal breast cancer among both AAs and immigrant W/WCAs has been reported in the literature as well as**[10],** similar peak incidences in breast cancer around the premenopausal period for W/WCAs and AAs, similar patterns of late presentation for treatment of greater breast cancer in AAs and W/WCAs, and consequently lower survival rates in both groups**[11].** The specific risk factors for breast cancer may differ in W/WCAs, including such factors as menstrual and obstetric history, obesity, and high BMI appear to differ between AAs and W/WCAs**[11].** The literature also suggests similarly high prostate cancer susceptibility in W/WCAs and AAs related to enhanced testosterone responsiveness, early onset (youngest at time of surgery) and more severe prostate cancer (Highest rates of final Gleason Scores $\geq 8$ **[12].**

There are limited data on African migrants to Europe, but reports of an increased susceptibilities in these immigrants to breast and prostate are not found to date**[13, 14].**

Key roles of patient beliefs and attitudes in accepting cancer-prevention interventions

Perspectives among African Americans on receptivity to breast and prostate cancer screening

AA women are disproportionately affected by breast cancer mortality. In 2011, breast cancer was the leading site of new cancer cases and second leading cause of death in this group**[5].** To reduce mortality risk, culturally specific knowledge is needed to support and encourage regular breast cancer screening and risk-reduction behaviors **[15]** (e.g., dietary modifications, physical exercise, and genetic risk assessment). In comparison with EA women, AA women tend to have higher susceptibility to and lower knowledge of breast cancer, to be more likely to fear radiation as a barrier to mammography, and are more likely to worry about getting breast cancer from radiographic breast cancer screening**[16].** Among AA women, the lowest rate of adherence to mammography screening recommendations in women with a high self-perceived risk for breast cancer but low perceived benefit of mammography**[17].** While faith beliefs are among the most important factors among AA women that influence their attitudes towards breast cancer screening**[18].** Previous studies have specifically examined the association between Islamic faith and attitudes regarding cancer-prevention and screening among African-descended women at particular risk for breast cancer.

AA men are disproportionately affected by prostate cancer; it is the leading site of new cancer cases and the second most common cause of death in 2011**[5].** Among AA men, with recently diagnosed localized prostate cancer, self-perception/values and attitudes/beliefs about prostate cancer are influential**[19].** Gender differences in socialization and lifestyle practices tend to make AA men are more likely to adopt attitudes and beliefs that undermine their health and well-being, including beliefs related to masculinity**[20].** In a study by Odedina and colleagues**[21],** modifiable prostate cancer risk-reduction behavior was found to be influenced by perceived severity, cues to action, knowledge, behavioral control, and acculturation**.**

No previous studies have examined the effects of Islamic religious affiliation on cancer-prevention attitudes and practices in African descended men at who are at risk for prostate cancer.

Little has been documented on the beliefs and attitudes of US immigrant W/WCA men and women regarding breast and prostate cancer prevention and screening. However, among W/WCA women in Africa who were also health care professionals, a high proportion had very poor knowledge about the risk factors for breast cancer and, there was an extremely low knowledge of mammography as a screening method for breast cancer and relatively low knowledge about breast self-examination (BSE) as a screening method**[22].** This NIH study would be the first to examine US immigrant W/WCA Muslims in this regard.

Need for comparative data on the religious and cultural foundations of health behavior

A Rationale for Comparisons Within and Between the Target Populations:

AAs, ACs, and W/WCAs share in general a large proportion of common African ancestry and certain baseline cultural values. West and West Central Africa represent the largest origins of Africans transported to the Americas during the Transatlantic Trade of enslaved Africans from 1500 C.E. to 1870 C.E. Survivors of this Transatlantic African Diaspora represent an amalgamation of African peoples who became the founding populations of contemporary AAs and ACs. Thompson**[23]** has cogently argued that AA philosophy, including major aspects of African American cultural values, aesthetics, and belief systems has been dominated by five major African traditions.

These include the Yoruba of West Africa, the Kongo of West Central Africa, the Vodun of West Africa, the Mande of West Africa, and the Ejagham of West and West Central Africa. While these are certainly not the only influences on AA and AC social and behavioral patterns, they serve as a foundation upon which subsequent exposures to European, Native American, Christian, and Islamic cultural priorities rests. The selection of the target population allows us to identify and determine the unique influence of Islam on social and behavioral patterns related to cancer screening. This is highly important for addressing Specific Aim 1 (see methods).

The research design will also allow the research team to identify the best intervention protocols for increasing receptivity to clinical cancer screening in these populations (relevant for Specific Aim 2) (see methods).

## The Link of Islam and its Impact on Health Behavior Patterns

In the context of this study, Islam is yet another link that unites the members of AA and AC Muslims and the immigrant W/WCA Muslims. Islam is not only a religion, it is considered a complete way of life in that it provides prescriptions for all aspects of life, individual and social, material and moral, economic and political, legal and cultural, national and international**[24].** In turn, it is expected that the comprehensiveness of Islamic directives will permeate deeply into the psychosocial realities of its adherents, specifically in the $\leq 40$ age group targeted in this study.

In all three ethnic groups, Sunni Islam dominates (as it does internationally) and among both AA, AC, and W/WCA Muslims, many of the interpretations of Islam are derived from the Maliki legal system**[25].** Native-born American Muslims are mainly African Americans who make up a quarter or more of the total Muslim population in the United States**[26, 30],** approximately 687,500 individuals**.** During the last seventy years, many of these Muslims have converted to Islam, usually from Christianity. Often the three groups of co-religionists (AAs, ACs, and immigrant W/WCAs) pray together, yet the history of Islam in each group is different enough for us to speculate that many of the interpretations of the details of rituals and minor points of law will vary in the extent to which they modulate receptivity to cancer screening.

In West/West Central Africa, Islam has been a salient part of the region's history since the seventh century C.E.**[27].** Here, Islam has had a long association with commerce.

By penetrating sub-Saharan Africa in successive waves of Islamicization, the religion diffused from urban enclaves at the centers of political power and trade **[25].** Today Muslims comprise at least 46% of the population of West and West Central Africa (calculated from **[27]**) and are a small but growing proportion of the US population. In 2011, W/WCAs in the United States numbered less than 1,020,000 individuals (calculated from data in **[5]**), approximately half of whom were Muslims.

Growth of Islamic population in the United States and relevance to our proposed study sites

Islam is growing in adherents throughout the world. In the Americas, most of the projected growth in the region's Muslim population is anticipated to take place in North America, particularly in the U.S. and Canada. If current trends continue, the Muslim population in the United States is anticipated to more than double in the next 20 years, from 2.6 million in 2010 to 6.2 million in 2030**[28].** Among US-born Muslims, an estimated sixty percent are AAs**[29].** Immigrant W/WCA Muslims, AC and AA Muslims are well-represented in the Washington DC/Maryland/northern Virginia area (the DMV) as calculated from data provided in various studies**[*26; 30; 31; 2*9]**.

The Paucity of Sociocultural and Behavioral Research among US Muslims

There is little published literature on the health seeking behaviors of Muslims in general, and on how the fundamental tenets, beliefs, and customs of Islam might affect cancer prevention, specifically cancer screening. Among available studies, the majority focus on immigrant Muslims, usually Arabs, Persians, Turks, or South Asians, often in their countries of origin rather than in the US (e.g., **[32-34]**). Very few studies have focused on AA or AC Muslims specifically, even though the Islamic faith is quickly increasing in adherents among AAs and immigrant ACs. A qualitative study by Underwood et al **[35]** on the effects of Islamic beliefs on willingness to participate in breast cancer screening demonstrated that, despite Muslim women's knowledge of the benefits of regular breast cancer screening, they often choose not to participate in available breast cancer screening programs. This indicates that the screening programs were not structured in a manner that was consistent with the beliefs and customs of Islam (e.g., female doctors should treat Muslim women, and male doctors should treat Muslim men).

## The Subjects of Study

The subjects of this study include adult male and female African American (AA), Afro-Caribbean (AC), and first and second generation immigrant West/West Central African (W/WCA) Muslims aged 40years and older.

## Research Design

35 interviews among adult Muslims, aged 40 and older were conducted as part of a formative study to support the research proposal being submitted for financial support to the National Institutes of Health (NIH). The specific aims for the proposed research are:

**Specific Aim 1:** To identify the attitudes, beliefs, concepts, and practices of adult African American (AA), Afro-Caribbean (AC), and first and second generation immigrant West/West Central African (W/WCA) Muslims in the Washington DC/Maryland/Northern Virginia (DMV) area ages 40 years and older towards breast and prostate cancer and contrast those receiving interventions with these with both an internal control a previously studied external control group from Howard University.

**Specific Aim 2:** To explore the impact of each of the three different sets of religiously and culturally sensitized cancer-interventions and evaluate the efficacy of each of these interventions to positively influence receptiveness to regular cancer screening, as evidenced by retention and the follow-up survey.

Interviews were conducted over the course of two months and were conducted in person and over the telephone. These interviews were audio recorded, following the consent of the subject. Interviews were stratified by ethnicity (AA vs. AC vs. W/WCA) and gender (men vs. women). The total number of participants in this formative study were 35, 17 men and 18 women; 20 African Americans, 10 immigrant West/West Central African, and 5 Afro-Caribbean.

All interviews were conducted within the same two month timeframe to assure temporal consistency and comparability among subjects. Interviews also included the use of existing social networks among the Muslim men and women as a way of increasing the quality and quantity of participation.

Following analysis of the research data, these major policy questions are being addressed:

1. From the perspectives of AA, AC, and W/WCA Muslims, what constitutes optimal high quality cancer prevention at the levels of both primary and secondary prevention?

2. What are the dominant religious, social, and behavioral determinants of cancer awareness in this population? How can these be used to enhance and sustain cancer prevention strategies?
3. Of the interventions provided during this research, which have the greatest potential to produce sustainable anti-cancer behaviors? How can these interventions be institutionalized?

**Results**

Among the 35 participants, the level of knowledge about cancer was very low. When asked what they knew about cancer, 31 out of the 35 (89%) responded that they knew nothing, except that it was a deadly disease and was most prominent in the Black community. 4 out of the 35 (11%) knew specific causes of both breast and prostate cancer. This knowledge was greater in females compared to males (60%) and higher and more consistent in AAs and W/WCAs. When asked about their feelings towards cancer, 24 out of 35 of the participants (69%), responded with a form of the response that the disease was not of natural causes and can be prevented. 80% of the ACs gave this response. The remaining 11 participants (31%) claimed the disease to be preventable through lifestyle changes, better nutrition, and early detection of the disease in both males and females. This response was most prominent among AAs and W/WCAs and evenly distributed (50%) among the males and females of each group. 10 out of the 35 participants (29%) said cancer had impacted their lives, with 70% of those being males (5 AA, 2 W/WCA). Meanwhile, 23 out of 35 (66%) reported that cancer had impacted their friends' and families' lives. Despite this 34% difference, 74% of the participants claimed that they do not worry about the disease. This is because the teachings of Islam have taught them to only fear Allah and they believe that through eating properly and participating in certain healthy lifestyle practices, they can avoid being diagnosed with the disease.

The remaining 26% who are worried about cancer is due to the prominence of the disease in the Black community or the impact they have witnessed it to have on the lives of their friends' and families'. 25 out of the 35 participants (71%) believe that Muslims have special needs in regard to healthcare due to their need for religiously competent and sensitive care and their specific lifestyle practices such as eating and not eating certain foods, preferring natural/holistic options in healthcare, not participating in toxic chemical therapies, and the concerns and necessary respect regarding health decisions and general privacy that is required by the Islam religion.

The remaining 29% that disagreed felt that Muslims did not have special needs because they are simply human beings, no different from non Muslims and deserved to be treated as such. This response was most common among AA men (63%). When asked if they thought the government addressed these needs, 88% (31 out 35) of the participants responded in the negative with 52% (16 out of 31 participants) of those citing conspiracy reasons against their religious beliefs or the general Black community. 4 out of the 35 (11%) who responded in the affirmative did not necessarily belief the government made strides to address their needs but gave this response because they felt that it was not the government's responsibility to address these needs.

Due to the necessary and critical need for competence and sensitivity of the Islam religion, 57% of participants believed that fellow Muslim healthcare providers would be the best to address the healthcare concerns of the community. 31% believed that it was the individual who was victim to any ailment who would be the best to address their own personal healthcare needs. Meanwhile, 11% of participants believed that it was up to the Muslim community and public health advocates to increase knowledge and address the healthcare issues that may plague their community. When asked if their Islamic faith influences the decisions made concerning the healthcare they seek, 23% responded in the negative, with this response being most common among males (63%) and 60% of those being AC. The remaining 66% (23 out of 35) responded in the affirmative with 35% explaining that because of their faith they seek out Muslim healthcare professionals and 65% arguing that they try to use natural/holistic healthcare practices and attempt to avoid any health ailments with a certain diet and specific lifestyle that follows that of the Islamic tradition. Yet, 40% claimed that being Muslim does not affect their attitudes about cancer, while 60% said it does because it teaches them not to fear the disease. They only fear Allah and through prayer they are provided with the acceptance that everything that happens or does not happen is the will of Allah.

In addition, it also influences their belief that a natural diet and a lifestyle described in the Quran and by Elijah Muhammad can ultimately prevent the disease. Despite this response, 18 out of the 35 participants (51%) reported that Islam does not promote or prohibit cancer screening or certain kinds of responses to cancer and 57% (20 out of 35) said it did not influence their own personal response to the disease itself.

The results were the same when asked if cancer screening was against their aqeeda [fundamental religious beliefs] and if cancer disease prevention and seeking treatment contradict qadar [pre-destination]. This leads to the inference that the Islamic tradition over the years has become such a subconscious part of their lives that they do not recognize how much it influences many of their decisions, attitudes, and beliefs.

When discussing the historical and contextual traditions of Islam, 100% of the participants responded that Islamic and Western medical practices did not overlap but asserted that they should by offering more natural and holistic remedies. The discussion of the historical traditions of Islamic medicine: Tibb Nabawi [Medicine of the Prophet] being relevant to cancer prevention activities, resulted in 77% of the responses being no because participants were not sure. Meanwhile, the 23% that answered yes argued that most of the Tibb Nabawi practices promote healthy living, cleansing, and pure foods to prevent not just cancer and disease but other ailments as well such as Alzheimer's and arthritis and even some forms of cancer. This response was primarily that of female ACs and W/WCAs (75%).

The discussion of privacy resulted in 5 out of the 18 women (28%) saying that they have felt reluctance to remove their hijab [modest clothing] in medical settings. The majority of these women (60%) were AAs. When participants were asked if they thought it possible to maintain a comfortable level of hay'a[modesty] in healthcare situations, only 6 out of the 35 participants (17%) responded with a no. 86% of these participants were AA females. When asked about their feelings about medical treatment by healthcare providers of the opposite sex, 25 of the participants (71%) found it to be inappropriate, thus they put great effort into finding Muslim healthcare practitioners. However, if the healthcare provider is qualified, they will accept it. The 29% who said they had no problem with being treated by healthcare providers of the opposite sex were 100% male. All of these results were the same for the discussion of a person's aura [Islamically private parts of body] being touched by non-mahram [unrelated] individuals in the course of screening for cancer. Out of the 35 participants, only 14 had ever participated in cancer screening. However, 94% of participants are open to the idea of cancer screening for breast and prostate cancer because after the interview alone they find it necessary to not only be cognizant of their health status but also feel that it should be promoted because it could help them improve their lifestyle to have optimal health.

The 2 participants who were against the idea of cancer screening simply did not like the idea of the process. These were AC women. 100% of the participants confirmed that they would participate in cancer screening.

## Discussion

Generally, religion has significantly different connotations in various cultures due primarily to history, politics, social events, and theological arguments. As a result, the diversity of cultural and religious beliefs of people, affects their views and perceptions of cancer care. However, despite any cultural differences between African American, Afro-Caribbean and immigrant West/West Central African Muslims, the idea of upholding and following Islamic beliefs were commonly of higher priority for participants. The results from these interviews suggest that overall, participants will benefit the most from general health education as well as education on cancer prevention. Moreover, 100% of the subjects agreed to participate in cancer screening if it was necessary or recommended by a trustworthy, qualified and preferably Muslim healthcare provider. The insight gained from this research further suggest that the best ways to address the healthcare concerns of this community would be to increase health education, improve neighborhood food selection outlets (i.e. provide more organic food markets), provide cleaner and healthier environments, and provide better access to healthcare facilities that consider their needs (i.e. holistic and natural medical approaches and healthcare professionals knowledgeable and considerate of the rules of Islamic tradition). These findings provide new possible ways for outreach and education in programs aimed at improving the use of cancer screening in the Islamic population. Based on the findings of this study, it is recommended that the questionnaire for the National Institutes of Health study be refined to stratify Sunni, Shiite, and the Nation of Islam Muslims.

## Implications for Policymakers

From the perspectives of AA, AC, and W/WCA Muslims, what constitutes optimal high quality cancer prevention is culturally and religiously competent care preferably by a Muslim doctor because that is who they feel most comfortable with. At the primary prevention level, at the individual level, we can provide religiously and culturally competent counseling on healthy lifestyles: dietary counseling that consider the "eat to live" philosophy taught in Islam, tailored to those who are at risk for prostate and breast cancer.

At the population level, we can institute publicity campaigns alerting the public to the benefits of lifestyle changes in preventing prostate and breast cancers; promotion of natural eating habits, holistic practices, and generally healthy lifestyles as defined and promoted by Islamic teachings; subsidies to help people access exercise programs; screening campaigns. At the secondary prevention level, at the individual level, we can promote prostate exams at the earliest age of risk in addition to mammograms to detect prostate and breast cancer early. At the population level, we can promote and institute organized cancer screening programs.

According to the findings, the dominant religious, social, and behavioral determinants of cancer awareness in this population is deeply rooted and established by the teachings of Islam. Interventions that promote health education, nutrition, and screening would be the best means to enhance and sustain cancer prevention strategies. In this population, they believe in "eating to live". This means eating appropriate, permissive foods based on the Islamic teachings found in the Quran. This population generally feels the most comfortable and has the highest trust in healthcare professionals who are Muslim. Furthermore, this population does not worry about cancer because due to their Islamic beliefs, they do not fear anything but Allah and nothing can contradict predestination form Allah's perspective.

It is recommended that the suggested strategies be used (1) provide cancer screening (2) provide outreach that will proved social support, and (3) provide case management services for qualified individuals through culturally and religiously competent health organizations. This will enhance and sustain cancer prevention strategies.

It is also recommended that health education be institutionalized using mass media and other culturally acceptable means of community mobilization. Also, systematic, available, and affordable cancer screening should be incorporated into basic health care.

**Implications for Healthcare Providers**

As illustrated by the results of this formative study, not only is the patient's culture and religion critical to healthcare but it is equally important for the provider.

It is recommended that healthcare providers provide a caring, trusting, social environment for patients. This will lead to an increased interest by the patient and will offer the potential to connect him or her into a positive, respectful relationship with the physician. Creating a positive relationship with the healthcare provider strengthens the possibility of informed, shared decision-making regarding early detection and cancer screening.

It is also recommended that healthcare professionals should be provided with cross-cultural training to improve their ability to provide quality care to diverse patient populations, including those of the Islamic faith.

## Future Research

This study should be utilized as a catalyst for further necessary and critical studies regarding the Muslim community. This may include studies that emphasize faith-based approaches to preventing and treating diseases, especially chronic disease. In addition, explore strategies for successfully engaging with these Muslim communities to distinguish the biopsychosocial context of particular faith-based directives, to assess the impact of the resulting practices on potential disease burden, and to explore religiously-acceptable and culturally appropriate alternative interventions to promote preventive care and reduce disease risk.

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