we found significant positive correlations between all Hedgehog signaling pathway molecules immunreactivity- between Shh and Smo (r=0,263; p<0,05), Shh and Gli1 (r=0,373; p<0,05), Smo and Gli1 (r=0,284; p<0,05). Significantly higher Shh expression was found in stage T3 and T4, as compared to stage T1 and T2 PDAC tumors according to TNM classification (p<0,05). Significant correlation was also found between immunoexpression of Shh, Smo, Gli and Ki67 in PDAC group (r=0,379; r=0,241 r=0,28, respectively; p<0,05). In addition, significant correlation was found between high Smo immunoexpression and longer survival (r=0,243; p<0,05). Conclusions: The correlation of all Hedgehog molecules immunoreactivity with Ki-67 and Smo with the survival time may support the hypothesis on their role in both early and late pancreatic carcinogenesis. In addition the presented results may suggest their prognostic role in PDAC.

Su1271

PARANEOPLASTIC DIFFERENTIAL ADIPOSE TISSUE LOSS IMPACTS SURVIVAL IN PANCREATIC CANCER INDEPENDENT OF SARCOPENIA

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Background: Pancreatic cancer (PC) induces paraneoplastic diabetes that is paradoxically associated with weight loss, which includes loss of adipose tissue (AT) and muscle. AT in the subcutaneous (SAT) and visceral (VAT) compartments behaves differently in weight loss, with predominant VAT loss occurring in physiologic weight loss that leads to amelioration of type 2 diabetes (DM). We have shown that PC exosomes cause lipolysis in SAT leading to differential loss of SAT over VAT in PC. In this study, we characterize the differential loss in VAT and SAT in PC and analyze its effect on survival. **Methods**: Patients with PC (n=219, mean age 70±1 years, 59% M) who had an abdominal computed tomography (CT) scan at the time of their cancer diagnosis and another available CT scan at least one year (median 4.5 years) prior to cancer diagnosis (performed for unrelated indications) were compared to colon cancer (CoC) patients (n=140, mean age 68±1 years, 56% M). SAT and VAT area were measured at the L3-L4 vertebral level using TeraRecon. Abdominal muscle area was measured at the L3 level using an imaging analysis protocol developed in MATLAB. Weibull parametric hazards survival model was used for multivariate analysis. **Results**: Difference between % AT loss in SAT and VAT (SAT-VAT) was 8±2% in PC vs -5±5% in CoC (P=.008). A differential of ≥ 10% between SAT and VAT loss was seen in 42% of PC vs 24% of CoC patients (P=.0003). PC patients demonstrated 9±1% loss of muscle Vs 3±1% in Col Ca (P<.0001). Median survival after diagnosis was 2.5 and 20 years in PC and CoC respectively. In univariate analysis, differential between SAT and VAT loss ≥ 10% was associated with worse survival (**Figure 1**, median 2.4 vs 2.8 years, P=0.06) in PC but not in CoC (median 30.1 vs 18.2 years, P=.16). Muscle loss ≥ 15% was associated with worse survival in both PC (median 2.3 vs 2.9 years, P=0.004) and CoC (median 13.2 vs 22.3 years, P=0.06). In multivariate model (**Table 1**), differential loss of SAT and VAT ≥ 10% was associated with worse survival in PC (HR 5.5, P=0.02) independent of the effect of muscle loss ≥ 15% (HR 9.5, P=0.002) and after adjusting for loss of SAT and severity of weight loss. A trend of decreased survival with muscle loss ≥ 15% (HR 3.32, P=0.06) was seen in CoC patients in whom differential loss of SAT and VAT ≥ 10% did not impact survival. **Conclusion**: PC patients demonstrate a unique paraneoplastic weight loss with relatively higher loss of SAT than VAT which seems to be associated with reduction in survival. Both PC and CoC were associated with reduced survival in patients with significant sarcopenia likely reflecting advanced disease. However, reduction in survival in PC associated with paraneoplastic differential SAT and VAT loss was independent of sarcopenia. Further exploration of the pathogenesis may lead to early detection of PC.

Table 1. Multivariate parametric survival model in pancreatic cancer and colon cancer.

	Pancreatic Cancer		Colon Cancer	
	Hazard Ratio	P-value	Hazard Ratio	P-value
Percent loss of SAT- Percent loss of VAT ≥ 10%	5.50	**0.02**	1.72	0.19
Percent loss of muscle ≥ 15%	9.56	**0.002**	3.33	0.06
Weight loss severity (mild vs moderate vs severe)	0.96	0.62	0.10	0.95
SAT change (loss vs no loss)	0.20	0.66	0.04	0.84

Table 1. Multivariate parametric survival model in pancreatic cancer and colon cancer.

Figure 1. Survival of pancreatic cancer patients with and without paraneoplastic differential adipose tissue loss.

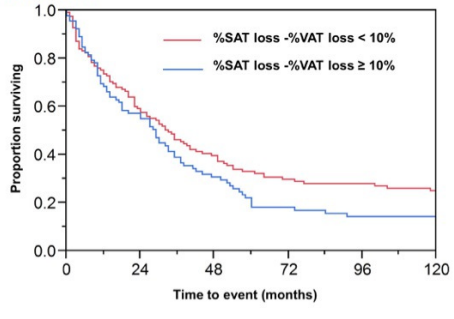


Figure 1. Survival of pancreatic cancer patients with and without paraneoplastic differential adipose tissue loss.

Su1272

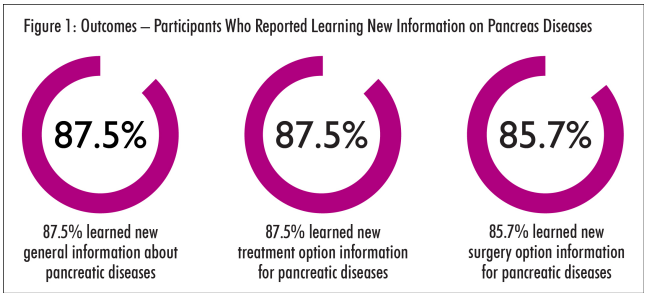
NATIONAL PANCREAS FOUNDATION'S (NPF) PATIENT EDUCATION INITIATIVE: ANIMACIONES SOBRE ENFERMEDADES DEL PÁNCREAS UNA GUÍA ANIMADA PARA PACIENTES SOBRE ENFERMEDADES PANCREÁTICAS

Satish Munigala, Mathew Alsante, Jane Holt, Carlos Fernandez-Del Castillo, Andres Gelrud

Background Pancreatic diseases (PD) account for substantial morbidity and mortality; current U.S. costs are $3.73 billion (direct and indirect costs). The burden of PD continues to increase; however, reliable evidence-based education in PD for patients is limited. The *Institute of Medicine* reports 90 million Americans lack health literacy (HL) skills needed to act on health information. 41% of Hispanics lack basic HL and only 4% have abilities to make appropriate health decisions. In the U.S., Hispanics constitute the largest minority (15%) and are estimated to reach 30% by 2050. Providing education to facilitate informed patient decision-making has been shown to improve outcomes. To help address HL in the Spanish speaking population, the *NPF* has introduced www.PancreasAnimado.com to educate patients, family members and health care providers, and improve PD health outcomes. We evaluated *PancreasAnimado.com* as a visual education resource, to address needs, and reduce HL barriers to improve disease understanding and health outcomes in PD. ***Methods*** Using visual formats of learning for education (animations, expert videos, slide shows) we tracked patient interactions and knowledge transfer via the *PancreasAnimado.com* website and YouTube from April 2015 to October 2016. We evaluated performance metrics of patients who reported learning new information and commitment to change (CTC) via a voluntary pre- and post-test questionnaire, as well as program surveys. From our website and YouTube channel, we tracked and aggregated the number of visitors to our program, what content was viewed, as well as learner metrics for most popular content by media type and top video retentions. ***Results*** From April 2015 to October 2016, the program garnered **493,981 views** and reached an audience of **150,865 visitor**s from 176 countries. **Table 1** summarizes the top 5 animation topics. The top 2 videos with the highest retention were ***Pancreatitis aguda: ¿qué alimentos y bebidas debo evitar?*** (95%) and ***¿Qué puedo esperar después de un ataque de pancreatitis aguda?*** (94%). **Figure 1** illustrates that Hispanic participants substantially increased their knowledge and understanding of PD. Hispanic participants also reported CTC in 3 ways: 86.3% indicated they will use the information learned to better self-manage their disease; 100% planned to discuss the information learned with their doctor; 100% indicated discussing treatment or management interventions with their doctor. ***Conclusions*** Pancreas disease online education consisting of animation and video formats has great potential to provide effective education to Hispanic patients. We demonstrated wide reach, effectiveness and learned outcomes among Hispanic audiences as validated by website and YouTube activities.

Top 5 Most Popular Animations

Animation Title	# of Views
Función y anatomía del páncreas (The Role and Anatomy of the Pancreas)	170,240
Qué es la colangiopancreatografía retrógrada endoscópica (CPRE)? (Understanding Endoscopic Retrograde Cholangiopancreatography (ERCP)	74,008
Cáncer de páncreas: signos, síntomas y factores de riesgo (Pancreatic Cancer: Signs, Symptoms and Risk Factors)	67,428
Pancreatitis crónica (Chronic Pancreatitis)	52,458
Pancreatitis aguda (Acute Pancreatitis)	37,356



Su1273

ENDOSCOPIC ULTRASOUND FINDING IN PATIENTS WITH EXOCRINE PANCREATIC INSUFFICIENCY AND LOW FECAL ELASTASE

Mohamed O. Othman, Nedaa Husainat, Abdalaziz Tabash, Kalpesh Patel

Introduction: Exocrine pancreatic insufficiency (EPI) is characterized by maldigestion and malabsorption of nutrients and vitamins. Patients with this condition can have no or minimum symptoms such as abdominal discomfort or loose stool. Recently, Primary care physicians and gastroenterologists have been using Fecal elastase-1 as a screening tool for EPI. Some of these patients are placed on pancreatic enzymes after their diagnosis with immediate relief of their symptoms but no further work up is done to investigate the cause of EPI. Endoscopic Ultrasound (EUS) examination of the pancreas is highly sensitive for the diagnosis of chronic pancreatitis, fatty pancreas or pancreatic cancer. The aim of this study is to examine the EUS finding of patients who were found to have low Fecal elastase-1 on initial assessment. Methods: This is a retrospective chart review of all patient who was initially found to have low fecal elastase (<200 µg/g) and then underwent EUS examination from January 2015 till October 2016 in a tertiary referral center. Patients' demographic and EUS